Lettsomian Lectures

ON THE

DIAGNOSIS AND MANAGEMENT OF LUNG-DISEASES IN CHILDREN.

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LECTURE I.

MR. PRESIDENT AND GENTLEMEN,—It is not possible for me within the compass of three lectures to treat systematically of a subject so wide as the lung-diseases of children, nor is it necessary that I should attempt any complete account of them to an audience that has examples of such diseases under its daily observation. My object will be rather to present to your consideration some of the difficulties that encounter the practitioner at the bedside—first, in regard of the recognition, and, secondly, as to the management of these disorders in the period of infancy and childhood. I propose this evening to deal with some points in the diagnosis and treatment of the *tuberculous* group of lung-diseases in children.

As evidence of the difficulty that attends the investigation of these complaints I may state that in a single case-book of mine at the Children's Hospital, for 203 cases in which we believed that we definitely recognised consumption in the lungs, there were 45 cases in which, on a first examination, a certain diagnosis could not be made; and a very experienced and conscientious clinical assistant of the hospital has recorded his opinion of the difficulty by setting a query against two-thirds of the cases in which he believed tubercle to be present. And I may appeal to the experience of my hearers whether they do not constantly find themselves unprepared with a positive answer to the anxious question, "Do you think the child is consumptive?"

Doubt and difficulty in answering this question arise from two separate sets of considerations. On the one hand, the little patient may really have tubercle in its lungs; but, through the absence of many of the means of diagnosis that assist us in the adult, we may not be able to affirm the fact. On the other hand, "consumption" in its literal sense of wasting may be intense, and a number of symptoms may be present which in the adult we should at once set down to phthisis, and yet not a particle of tubercle may exist in that child's body.

Among the signs that have value in the phthisis of grown people, but which are absent or of equivocal signification in the child, are firstly to be mentioned the whole class of subjective sensations of which little or no account is rendered by the child; secondly, it is only in older children that expectoration of any sort is presented for our examination, and hæmoptysis, one of the first symptoms for which we inquire in the adult, is rare in children. Of the 203 cases I have mentioned, only two had spat blood at the time they came under observation. Thirdly, owing to the more acute course of the disease in early life, those symptoms which indicate softening and cavity of the lung are seldom met with. Perhaps it is for the same reason that night-sweats are uncommon in the phthisis of infancy. Next, the results of physical examination of the chest are frequently equivocal and obscure. Flattening of the chest is only noticed in the rare cases where cavity is formed, or where the lung has become adherent to the wall of the thorax. Auscultation gives but few, and—in cases of early or rapid phthisis—only uncertain results. The most reliable evidence it affords is feebleness of respiratory murmur, with more or less coarseness of sound up to actual bronchial breathing; but even this is apt to be closely simulated by echo from the child's throat. Prolonged expiration is seldom observed, but notable division of the inspiratory sound is more common. Yet the disease may be considerably advanced, and be even threatening speedy death, without other auscultatory signs of it than rhonchus more or less coarse, which would be quite explicable by bronchitis alone. Percussion, though giving more important evidence of the state of the lung, is exposed to many sources of error from which the use of this means in the adult is exempt. Unless the child be in a quite symmetrical position, without constraint of either side, it is impossible to get any valid result from percussion. At one moment the left side seems duller than the right, at another the right is duller than the left, just as the one or the other side of the chest is prevented by position from expanding so thoroughly as its fellow. In the same way, unless the two sides of the chest be examined at the same stage of the respiratory act, the results of their percussion are absolutely incomparable. Now, to make a young child modulate its breathing for our convenience is out of the question, and I therefore use the plan of percussing each spot about which I want accurate information, several times over, through the different phases of inspiration and expiration, and thus obtain a complete average notion, as it were, of the resonance and resistance of that spot before going on to another with which I wish to compare it; then percussing the second spot in like manner. If a child is moderately thin and lying quietly, I prefer percussion practised immediately with the pulp of the finger over the clavicle or rib, to the use of the left hand finger as a pleximeter. The resiliency of the spot percussed is thus more perfectly appreciated; and in comparative percussion the risk of altering results by not fitting the left forefinger into exactly corresponding places on the two sides of the chest is avoided. Another observation concerns the normal difference between the two apices. In children under seven years old this seems to me to be almost the opposite of the difference habitually observed in the adult. From a large number of observations I am disposed to say that, if there is any difference between the two apices in a healthy child of this age, it is that the left side is commonly a little duller than the right. If, as I think, a greater importance attaches on this account to slight degrees of dulness at the right apex, the point may be of some importance clinically. In an adult who has a tuberculous cavity in his lung, the peculiar percussion-note known as the "cracked-pot sound" is very significant. In a young child, this sound is absolutely worthless as evidence of cavity; for a perfect sound of this kind may be got by sharp percussion under the clavicle of many a healthy infant if it should happen to be holding its mouth open, and is almost certain to be elicited if the child be a rickety, though otherwise healthy, baby. And, lastly, when percussion and auscultation have established the existence of consolidation in the apex of a lung, the nature of this is open to various interpretations in the child that we scarcely need to consider in the adult; and this arises particularly from the frequency of chronic and lobular pneumonia of the upper lobe in children.

Two chief lessons in diagnosis seem to be yielded by these considerations. The one is, that a single observation of the chest is extremely apt to be misleading, and that repeated examination is wanted for the elimination of what is temporary and accidental before we can be sure of the validity of physical signs in the chest of a child. The second lesson is that, inasmuch as we have none of those conditions in the child which in the adult may be pathognomonic of tubercle, it is upon a consideration of the total phenomena of a case, and not upon physical signs or general symptoms by themselves, that we shall most safely rely for our recognition of tubercle in the lungs of children. Still it will be surprising to no thoughtful practitioner, who considers the many causes there are for a child wasting and the scanty physical alterations that are caused by miliary tubercle scattered through a lung, that there remain many children, apparently consumptive, as to whom we ought not, for some time at least, to have a positive opinion whether they are tuberculous or not.

The nature of the considerations which determine diagnosis of tubercular phthisis in the infant may be best set out by the story of a few illustrative cases. Here is an instance which has its parallel in the frequent experience of most of us.

A few weeks ago a child was brought to me who had been for five months under the care of a physician who said he was consumptive, and who had ordered him cod oil and steel, meat and wine, and had advised change of residence for him. He is the child of healthy parents, and was suckled by his mother till he was eighteen months old. He got his first teeth at seven months, and at a twelvemonth old he could run about. He had had none of the ordinary maladies of childhood, but eight months ago he was "taken off his legs" by his present illness, and he was found, at the age of two years and two months, intensely emaciated and suffering from a cough, which however had only lasted a week or two. The child had all his teeth, and gave no suggestion of rickets except that his belly was big and the lower ribs bulged outwards. His chest was of a squarish shape. The apices of both lungs were slightly dull, but there was no dulness behind the sternum to indicate

that the bronchial glands were notably enlarged. All over the chest the respiration was loud and harsh without any special quality at the apices, and there was a small amount of ordinary sonorous rhonchus. Posteriorly the lungs were clear to almost their extreme bases. The tongue was natural, but diarrhœa was frequent. Examination of the abdomen showed that the mesenteric glands were not enlarged, that the spleen was of natural size, and that the liver projected two inches below the false ribs. Here was a child with a number of general and some local signs of tubercle in its lung, in whom, however, we could exclude notable deposit in the lymphatic glands.

Let me here digress for a moment to quote two cases that illustrate the point which the diagnosis has now arrived at. The one is that of a little child whom I lately saw with a practitioner in Bloomsbury; it was three years old, rickety, and after two months ailing, with no chest symptoms and not much emaciation, it died somewhat unexpectedly in convulsions, and the lungs and other organs were found stuffed with miliary tubercle. The second case is quoted from Dr. West. A child of ten months old (like the former one, being rickety) emaciated rapidly, began to cough without previous catarrh, and "her case seemed to be one of bronchial phthisis." She died in the course of a few months, and on post-mortem examination there was no tubercle, only great collapse of the lung.

Now having such cases as these in mind, not singly but many of them, on one side and on the other, could we say in the case of the little patient under discussion, that the disease which had reduced him to this point of emaciation was certainly phthisis? The positive evidence was considerable, and appeared to have already led a physician, for whose opinion I had much respect, to diagnose tubercle. On the other hand, what importance was to be attached to the fact that after eight months' existence of disease, a little cough of a week's duration, a trivial dulness of the apices without evidence of any lymphatic enlargement, were the most definite physical signs in the chest that accompanied the serious derangement of the general health? In answer to this question it must be confessed that this course of the disease was not incompatible with the diagnosis of tubercle; yet it was so far different from the ordinary run of symptoms that one was the more ready to seek for other conceivable causes for the condition of emaciation, and experience then led one to inquire minutely about the way in which the feeding of this child had been managed. It turned out that before the weaning of this baby, its diet had been meat, beer, potatoes, and tea, given to it because (being eighteen months old) it did not seem to be thriving on breast-milk, and wanted strengthening. Since it had been weaned, the same food, with bread-and-butter, but very little milk, had been continued, and the diarrhœa, which was a natural consequence of these arrangements, had been treated, not by a change of diet, but by a variety of drugs. As the child wasted, port wine was added to its already advanced *menu*. How far did these considerations alter the diagnosis of tubercle? Certainly much, for although persistent dyspepsia is itself a condition prominent in infant's phthisis, yet the state of stomach and bowels in our child had unquestionably preceded by some time the other symptoms, and was probably brought about by the mischievous feeding. The diarrhœa, the loss of appetite, the flatulent abdomen, the emaciation—probably also some liver enlargement,—that made up the chief parts of the disease at its early stages, might directly be due to this state of stomach and bowels, and then the slightness of the lung-symptoms would seem to become readily explicable. But assuming for the moment that the digestive organs were primarily at fault, then again another question arose. For months the child had been getting little or no good from its food, and was reduced to a miserable state of nutrition; lately cough had come on, and there was some little dulness under the clavicles. Might it recently, and as a secondary condition, have been getting into a state of general tuberculosis, of which some evidence was beginning to appear in the lungs? And practically, therefore, must we not equally say that the child was consumptive, perhaps predicting for its disease even a more surely and rapidly fatal course? A provisional answer only was attempted to this question at the first consultation, and meanwhile the obvious course was taken of altering diet, dropping all tonics, and treating the disordered stomach and bowels, while the cough was met by linseed-meal poultices to the chest. On this plan the child had mended somewhat when I saw him again a fortnight later; he had got more cheerful and lively; rhonchus had disappeared, but some dulness remained; the bowels were acting only two or three times a day. I have not seen him since, and have reserved an absolute decision upon the nature of his disease. Yet I am even now disposed to think that the primary disease has been subacute gastro-intestinal catarrh, that the lung symptoms are transitory, and there is reason, therefore, for expecting a favourable termination to the case.

This child has furnished an excellent illustration of the difficulty of separating consumption from a small amount of ordinary lung-disease accompanying a condition of wasting from other than tubercular causes. He would be a very bold, and I think a very unwise physician who professed to be always able to make this diagnosis with the certainty that anxious friends are apt to expect from him, at any rate on the first occasion of seeing an infant. And yet such considerations as have guided us here will generally, after some study of the case, enable a pretty true conclusion to be drawn.

The teaching of the case I have reviewed has reference to the recognition of phthisis among various *chronic* states, for our child had been ill for a third part of its small life with the symptoms that brought it to me for advice. Let me now illustrate the difficulty of diagnosing what appears to be an *acute* case of phthisis in a child.

A little boy, six years old, was seen by me a short while since in consultation with a medical friend at Woolwich. His father had died of phthisis, but the child had enjoyed good health until three weeks before he came under observation. On careful inquiry, however, no definite commencement could be assigned to the illness, and it was allowed that he had not been quite well for some time before his attack. Still, nothing of consequence was observed until he became languid and feverish, lost his appetite, and had some little wandering at night. When I saw him he was lying prostrate on a sofa, pale, but with a slight flush on his cheek, a hot skin, a rapid pulse, and accelerated breathing. On percussion, there was no dulness of any part of the lungs, but considerable mucous râle over the whole chest. The abdomen was neither retracted nor inflated; there was complete distaste for food, and some thirst; and the tongue was moist, with a little white fur. For some days five or six offensive stools, variously coloured, had been passed daily, perhaps as the result of medicine. The urine appeared natural. The case looked so much like one of typhoid fever that careful search was made for the spots characteristic of that disease, but none were found. Still, knowing that in children these spots are often absent throughout unequivocal typhoid, and remembering that the child had been ill for three weeks, much importance could not be attached to the want of eruption. For a week the question between acute consumption and typhoid was left open—a question of what gravity in prognosis need not be said. At the end of the week, by keeping the child on milk and lime-water, light broths, and giving ipecacuanha and ammonia with catechu, some improvement had taken place; and now it was hoped that a positive opinion could be given as to the nature of the disease, and the chances of recovery from it. There was a little moisture of skin, somewhat less rhonchus in the chest, and the stools were three a day, and more nearly solid. Could it be affirmed that the fourth week of typhoid was being passed through, and that in a few days convalescence would begin? By no means. While the little improvement was pardonably allowed to cheer the mother in the nursing of her child, to my medical friend I was bound to state that the case was wearing a more serious aspect. The family history, the manner of onset of symptoms, the absence of diarrhœa for the first two weeks, the want of spots, and the amount and distribution of the lung rhonchus,—although each of these peculiarities in the case was perfectly compatible with typhoid, still, taken together, they had from the first disposed the diagnosis rather to the side of acute tubercle; and now, in the course of a fourth week, when in young children typhoid has almost always begun to pass away, there was nothing of improvement to show but a little local amendment in the state of the larger bronchi and of the intestines, but the main disease was plainly without abatement. However, in a few weeks the child got a little better, and the next time I saw it was a month later at Tunbridge Wells. Instead of the renewed strength that had been hoped for from this change, the child was found lying with pitiable patience in a still further stage of prostration, but with small change only in its local symptoms. The diarrhœa had got worse and less manageable; and, in the lungs, a suspected dulness of both apices, and a certain amount of consolidation of one base, were noted. On learning the immediate danger that the child was in, its mother took it back to Woolwich, and in the course of another week I made its post-mortem examination. Everywhere there were tuberculous granulations—in the lungs and bronchial glands, in the

liver, spleen, and intestines. The deposit in the lungs was wholly of the miliary sort, with no large solid masses; there was much bronchitis and some lobular pneumonia. The small intestine was ulcerated, but the actually existing ulcerating process, the thick edges of the ulcer, and the presence of tubercles under the mucous membrane, left no doubt that the ulcers were tuberculous, and not those of typhoid.

The important practical conclusion, then, I take to be this: in the child, tubercular phthisis may be simulated by such various disorders, may itself take on such various forms, and (as we have said) so many of the aids to diagnosis that are present in the adult are wanting in the child, that we should, except in the plainest cases, refuse to commit ourselves to a diagnosis until we have several times seen a child, and have had the opportunity of observing the fluctuations of symptoms, and then we may further get information from the effect upon the disease of altered conditions of food and management.

The two sorts of difficulty which are illustrated by the cases I have quoted relate primarily to the diagnosis between phthisis and diseases of quite another type, which have a deceptive similarity to it. But there is a large class of cases to which I have referred, and to which the doubts of our clinical assistant have mostly applied, in which we can establish that the essential disease is a lung affection, but where, nevertheless, we have the greatest possible difficulty in affirming or denying its tuberculous nature. It is to lobular pneumonia, and to inflammatory consolidation of the upper lobe of the lung, that this difficulty principally has reference; and it must be allowed that clinical and pathological considerations alike forbid us, in certain cases, to come to any positive conclusion on the question, even during the entire course of the disease. I shall briefly speak of what is known and believed to be known concerning the methods of coming to a decision between these lung diseases and tubercular phthisis, reserving fuller consideration of certain points until my lecture on pneumonia and on bronchitis, with their incidents.

Lobar pneumonia in children makes exception to its ordinary definite and rapid course when the upper lobe of the lung is attacked by the disease. The exudation is then much more slowly deposited, and is also much more slowly removed; and the febrile symptoms are out of proportion, in severity and duration, to the degree of local mischief. Now, in the adult, in confessing the difficulty of separating apex-consolidation by such pneumonia from the consolidation of tubercle, we should say that the point was not of much practical moment, inasmuch as in the adult pneumonia of the upper lobe is in all probability itself of tuberculous nature. But this rule does not so certainly hold good in children; for in the young child pneumonia may have its seat in the upper lobe without any suggestion, either in family history or in previous health, of any scrofulous or tuberculous tendency. And the disease may absolutely, though certainly slowly, pass away, and leave no physical evidence of consolidation behind—a fact which, in the minds of most pathologists, appears to be conclusive as to its non-tuberculous character. But observe how physical examination may give absolutely no assistance in determining the nature of the solidification in the lung. Intense dulness over the upper lobe, increased vocal fremitus, strong bronchophony, and loud bronchial breathing—signs which merely tell that we have a solid instead of an air-holding tissue in question,—tell nothing of the nature of the process by which the consolidation has been brought about. And it may be that the general signs convey no more decisive information. The severe cough, the great restlessness, the rapid emaciation, and protracted course of pneumonia of the upper lobe, are equally present in phthisical consolidation. Such complete consolidation of the upper lobe in phthisis will only come from the infiltrated form of the deposit, which then has strong clinical and pathological affinities with the exudation of pneumonia. But there are other cases where an opinion between the two diseases may be arrived at. What is called tubercular infiltration is less common by far than miliary tubercle, that gives less dulness, less bronchial respiration, and altogether slighter physical signs. Then, again, tubercular consolidation probably exhibits less definite commencement of symptoms, and has been preceded by loss of appetite, emaciation, and feverishness for some weeks or months. And of great importance, though not of conclusive significance, in diagnosing tubercle under such circumstances, is the presence or absence of the diathesis in other members of the family. I need hardly add, that the existence in other parts of the body of disease definitely ascribable to tubercle settles the diagnosis for all practical purposes. But the attention of the profession has recently been directed by Ziemssen of Greifswald to the means of distinction that are afforded by the thermometer. He finds that in lobar pneumonia, even of the apex, he gets a higher degree of febrile heat, and a smaller range of fluctuation between morning and evening temperature, than he observes in consolidation from tubercle; and his observations, very carefully conducted and recorded, point, therefore, to an element of diagnosis that should be used in the cases where other distinctions fail us, though it must be confessed that the method of examination by the thermometer in the rectum observed at regular times of each morning and evening—for except in this way no valid results were got—is not the best suited for every-day private practice.

(To be concluded.)

An Address

DELIVERED AT THE

MEETING OF THE MEDICAL TEACHERS' ASSOCIATION,

On the 20th of January, 1868,

BY JOHN SIMON, F.R.S., PRESIDENT.

GENTLEMEN,—In appearing before you for the first time in the capacity of your president and chairman, I must beg leave briefly to express my thanks for the unsolicited and unexpected honour, the very high honour, which places me here. Among the functions which have to be fulfilled by the foremost members of our profession, none, in my opinion, can be deemed of higher dignity and importance than that which they exercise when training worthy successors for offices and responsibilities like their own. And that you, gentlemen, medical teachers of this great metropolis, where ought to be the best medical teaching in the world—that you, preparing to take counsel together as to the ways by which our schools may be rendered more effective for their national, their world-wide purpose—that you should have invited me to be the first president of your new Association, is, believe me, an honour of which I can never cease to retain a most proud and most grateful recollection.

Gentlemen, on this first occasion of our meeting, I may, perhaps, with your indulgence, venture to make some few remarks, introductory to the business of our meetings, and in aid of good understanding between us, as to what are the *objects* of the Association, and what are the *means* by which they may best be attained.

Our essential object, gentlemen, is to learn by mutual consultation how we may best promote the efficiency of our respective schools, and make London all that it ought to be as a centre of professional education. Let us, then, first clearly determine what are the powers which our Association can exercise for that object. Here, above all, we have to remember that the Association cannot claim to exercise any kind of compulsive authority in the matters which occupy its attention. We are a merely voluntary Association, having, in law or to hostile judgment, absolutely no coercive power. Indeed, hitherto we are not even authorised to consult on behalf of all the schools of London; two of the number having, I understand, not yet decided to join us. We are in a position not very dissimilar from that of our scientific Societies—the Royal, or Medico-Chirurgical, or Pathological. We have to act through opinion, through reason. The more clearly this is recognised by ourselves as our rule of conduct, the more influence are we likely (I think) to have in matters where our opinions are right.

My impression as to what will be our best mode of action in seeking to give effect to our opinions rests entirely upon that view of the case. After very carefully considering the subject, I will venture to suggest to you, at least as a provisional rule, that our reformatory resolutions ought not primarily to be aimed at any but our own members. It will of course be incumbent on our members, and specially on the representative members of Council, to communicate to their respective

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schools the resolutions which we may here pass. Whether such resolutions relate to mere details of school discipline, or touch (as sooner or later they may) very much larger questions —even perhaps up to the constitution and functions of the examining authorities of the medical profession,—equally, for either sort of case, our best course of procedure will, I think, consist in formally remitting to our constituent schools the discretion of giving effect to the resolutions. If a resolution concern the schools themselves, each school, if it adopt the resolution, as no doubt will commonly be the case, can of course at once give effect to its adoption. If, on the other hand, the resolution be of a more general kind, requiring that other bodies be moved to action, we may fairly expect that the schools adopting our resolution will separately press the opinion where it requires to be pressed; and that thus, with also the influence of their individual members exerted to the same purpose, they will give much more effect to our intentions than we could give by any direct action of our body.

Turning now, at least in general terms, to the probable subject-matter of our future deliberations, I need not suppress my conviction (to the well-foundedness of which a silent testimony is borne by the mere existence of this Association) that the present rank of London among centres of medical education is not altogether satisfactory to us. We must, I fear, confess that the art of teaching (for teaching, I need hardly insist, is an art) is less cultivated, less advanced, less organised, among us, than it is in many places of far inferior resources. It is notorious that that high quality of scientific work on which the progressive development of practical medicine and surgery depends is not pursued in our schools nearly to the extent we should desire,—that, indeed, as compared with what is done in even the minor schools of Germany, our annual harvest of scientific result is often so small as to be almost insignificant. If this were all, it would be humiliating enough. But it is not all. Many among us have great misgivings whether, in the mere business of educating medical students to a proper level of practical efficiency, London, as a general rule, accomplishes nearly all which, with its wealth and vast opportunities, it ought to accomplish. This, too, is the more mortifying as we must all be conscious that in the aggregate an immense amount of labour is given in London to the business of medical teaching. We cannot but feel that there is a great deal of that sort of waste of strength which either attests very bad economy of the resources, or else the existence of powerful adverse circumstances. I will not venture to say that the first sort of influence is inoperative; on the contrary, I recognise many points in which I think our internal school-economy might be improved. But it is my very deep conviction, and one which I am glad to have an opportunity publicly to express, that such amendments of detail as our schools can make (separately or collectively) in their own arrangements are only a fragment—an almost inappreciable and insignificant fragment—of the reforms which require to be effected, if London is to take its proper rank among the great centres of medical education.

In my judgment, gentlemen, there are two objects which are of quite paramount interest to all who wish to improve our medical education: first, to insist upon a very high standard of efficiency and public spirit in all the EXAMINING BOARDS of the country; secondly, to insist upon a very great simplification, if not an almost entire extinction, of that ponderous code of detailed REGULATIONS under which now we either groan or sleep. That the importance of these objects in relation to the essential aim of our Association may not in any degree be underrated or misunderstood, I will venture a few remarks upon each of them,—necessarily, from the limit of time, restricting myself to some very broad considerations.

First, as regards our EXAMINING BOARDS. Think, gentlemen, what the Council of our College of Surgeons might have done in the last twenty-five years in promotion of medical science, if it had administered its great trust disinterestedly. Admitting to the profession annually several hundred members (sometimes, I believe, as many as 500, besides Fellows), with a fee of £22 a head, and able, I presume, to allot fully half of this very large income to the payment of a proper examining Board,—what is the course which it has taken? It has treated the examinerships in its gift as mere lucrative perquisites of its own body, best to be divided among its own members; and, with scarcely an exception, the ten oldest members of the Council have been the ten examiners of the College, sharing among them the payment I have described. The elder members of the Board have generally shown so much attachment to office that the succession of younger men has become more and more impeded; and of late, I believe, sixty years of age has been about the earliest time at which a man's turn could come to enter upon the functions and profits of an examiner at the College of Surgeons. Can you wonder, gentlemen, that medical education has languished in England, when suffering under an influence like this? As regards the mere examination in surgery, it has been bad enough that men should only be entering upon that duty at an age when, in a normal state of things, they would rather be preparing to abandon it; and I cannot but deem it to have been very mischievous, even for practical surgery in this country, that our examiners for long past years have been men from sixty to eighty years of age. But think, gentlemen, what the mischief must have been, in relation to the sciences of our profession, that during this period of unexampled scientific progress, persons in the fourth and fifth vicennials of life have been empowered to settle, according to their own dim lights, what should be the standard of scientific proficiency for men first entering the medical profession! And this state of things, this utter corruption—for such it is, has been defended by arguments which, if they mean anything, mean that examinerships of vital importance to the strength and development of surgery and medicine, may be used as a kind of almshouse for effete members of the profession. How different things might have been if, some five and twenty years ago, our councillors there, instead of resolving to stand in chronic antagonism to the scientific interests of our profession, had but exercised the same sort of self-denial as the Senate of the University of London has exercised; had but resolved to disqualify themselves from appointing themselves or one another to be examiners; had allotted (say) two-thirds of their examination fund to the payment of separate examiners in the sciences, reserving one-third for surgical examiners, instead of jumbling all together, as at present; had put some decent limit of age even on their surgical examinerships; but, specially, as regards anatomy, physiology, and pathology, had gone on a quite new tack—had started with men then young enough to be their sons, but who were already eminent in scientific work, such men as Bowman, Paget, Busk, Quekett, Hewett, Birkett, Toynbee, Rainey, and others; and had from then till now taken care that all those parts of their examinations which grow with contemporary research should be in the hands of men fresh from the work-room. How different, I say, would be the present state of things if, twenty-five years ago, that course had been begun! How different, I may add, will be the future state of things—how different, twenty years hence, the status of our London schools in the eye of European science, if even now, tardily, a course of that kind should be determined on!

For, gentlemen, observe critically—and this not alone for the Royal College of Surgeons, but generally for all our boards—what are the effects of any abuse, either in the appointment of our professional examiners, or in the exercise of their functions when appointed. So long as incompetent men are appointed to these places, or maintained in them, it is at the expense of proper claimants; and these "proper claimants" are, or under happier auspices would be, the very life-blood of our medical schools. To such men, still comparatively young, the examinerships would have been great prizes, great rewards, great inducements—indeed often the only possible enablements, for continuing a scientific career; but they have been wasted from their legitimate application. That, however, is only part of the injury so done to the scientific interests of our schools. Look in this other direction:—an excessively low standard of scientific proficiency is encouraged among candidates for examination; and against the depressing and demoralising influence of such a standard it is quite impossible for any teacher to contend. The demand for first-class teaching, which of course a first-class examining board ought always to be maintaining at a maximum, falls within a hair's breadth of zero. See, for instance, what loyalty to science has long been shown, what gallant work has long been done, year after year, by Dr. Beale and by Mr. Huxley in their respective fields; and ask yourselves what special demand they, and others like them, can find in our medical schools for a quality of teaching of which any country might be proud! The teacher most in request is not the master of the science, who cares above all things for the truth in it, but the grinder who can cram the emptiest head with the pattest antediluvian answers. When high attainments are thus brought to a discount, what wonder that, with rare exception, scientific medical teaching is only incidentally cultivated among us!—cultivated just transitionally for a year or two, and then, even by our most promising young investigators, almost necessarily relinquished as impracticable! I apprehend that among our younger men there is as much disposition for scientific work as in Germany, as much disin-

terested love for science: in neither country will the career give wealth, nor does the man who is in earnest about science make wealth his consideration; but in Germany it will give a fair livelihood, while here, generally speaking, it will not. And the reason why it will not is, in my opinion, mainly to be found in the sort of abuses to which I have adverted. When we lament in the interest of our schools that, with very rare exceptions, medical teaching (and particularly the more scientific teaching) is not made a career, or even the leading element in a career, in London, note how those influences have told against it.

But, unfortunately, even this is not all. The case has an aspect in which the public and the profession are almost equally interested. The responsibility of admitting members to the medical profession of the United Kingdom is, as you know, trusted by the Legislature to some 19 separate bodies, some of which have no interest, or but the smallest and most indirect interest, in their own popularity as admission-boards; while others (like our College of Surgeons) depend entirely, or almost entirely, for income on the candidates whom they pass into the profession. An examining body, in the last-described financial position, is, perhaps, at the best, apt to be a somewhat partial judge whether its diplomas may not be too easy of attainment. And yet, according to the constitution I have described, it is necessarily, as regards income, competing with other bodies similarly circumstanced,—competing, gentlemen, for the patronage of candidates. I am afraid we must not expect that, as a general rule, the young patrons will prefer the institutions which have the most genuine and most searching examinations. To their honour be it said, they will sometimes do so; but we must not wonder if it be only to a small extent. In looking over the list of last year's registrations under the Medical Act, so far as some of our London bodies are concerned, I count that 345 diplomas of membership of the Royal College of Surgeons were registered in the year, and 191 licences of the Apothecaries' Company, but only 12 degrees derived from the University of London. Now, I believe there can be no difference of opinion in this meeting as to which of the three qualifications I have named best represents the standard of knowledge with which a man should enter upon the medical profession; but I need not observe that if the University of London had to maintain itself by its medical degrees, it would soon have to desist from the competition. Gentlemen, the question suggests itself, what becomes of the public, what of the profession, if admission to the Medical Register be made too easily attainable? Our profession often complains that its ranks are numerically overcrowded; and yet, sometimes, I am sorry to say, also the public complains that qualitatively a want has been ill-supplied. Have these facts anything to do with such defects of examining boards as those to which I invite your attention? Surely, it is impossible not to connect them. Look, gentlemen, at our system of fragmentary professional qualifications — so different from that which obtains in other civilised countries: surgeons, who may be totally untested in medical knowledge; physicians and apothecaries, who may be totally untested in surgical knowledge; yet, both indifferently on the Medical Register, and virtually free to practise all departments of the art. Let me read to you a short extract from a very interesting summary in the *British Medical Journal* of last year on the composition of the medical profession:—"One-tenth of the whole number of practitioners of the country are practising under a diploma given without examination in medicine, materia medica, or botany, and without any kind of clinical test whatever—that of the Royal College of Surgeons in England. Nearly one-fifth are practising with a surgical diploma only (obtained from various sources) which would not be accepted by the Poor-law Board, by the authorities of the army and navy, or others, as alone qualifying them to treat the persons under their charge; and which would not allow them to recover fees in a court of law for attendance or medicine in any other than purely surgical cases. Of course only a small proportion are practising pure surgery. In respect to medical degrees, the numbers are not quite so large; but there are 577 practitioners holding only the diploma of the Apothecaries' Hall of London, which does not imply of necessity any knowledge of surgery, or any adequate knowledge of anatomy. They are equally disqualified from holding any public appointment, and would be unable to recover for surgical attendance in any court of law. As a matter of law, the one in practising surgery and the other in practising medicine, are doing that which the law does not recognise, and which their legal status does not justify..... It will assuredly not fail to attract very serious attention, that upwards of 5000, out of a total of 20,000, practitioners, are not qualified by law to practise more than one department of their profession."

And, as the sufficiency of some of our most frequented examining boards may seem called in question by certain of the remarks which I have made, let me remind you that our public services of the army and navy have not been able to recognise the guarantee of our civil examining boards as sufficient for their respective purposes. They have had to appoint special pass examinations for their candidates, even though those candidates are on our Medical Register as competent to practise on the civil population; and, gentlemen, not unfrequently it has happened that this re-examination has been "a pluck." I regard this fact as so extremely significant that I beg to bring under your particular attention the last notice of it which I read in print. It was in THE LANCET last summer, and here was the state of the case as then reported to the Medical Council:—The Army Board had had before it for examination in 1866 fourteen candidates who were members of our Royal College of Surgeons, and four of these failed to pass the re-examination. I observe, however, that a happier batch of candidates from our Royal College was before the Army Board in February last, when five members (all who were then examined) succeeded in passing the test. The Navy Board had had before it in 1866 six candidates who were members of our Royal College, and their fate (arranging them in order of merit) was as follows:—No. 1 passed "good," but it is noted that he had failed twice before; No. 2 passed "indifferent, and deficient in anatomy;" No. 3 rejected, "ignorant of anatomy and surgery;" No. 4 rejected, "ignorant of anatomy and surgery;" No. 5 rejected, "ignorant of anatomy, surgery, and practice of medicine;" No. 6 rejected, "ignorant in all branches."

Gentlemen, I told you that in the scientific interests of our medical schools it is a first essential condition that you should insist upon a very high standard of efficiency and public spirit in the examining boards of the country. I venture to think that, besides proving that position, I have shown you that some other interests are concerned as directly as the interests of science, and indeed, referring to such statements as I last quoted, that the whole credit of our profession with the public is at stake, if any inefficiency of examining boards is to be tolerated.

The remaining point on which I undertook to say a few words (and they shall be few) relates to the code of REGULATIONS under which the work of education has to be conducted. I complain of them as ponderous and futile, and I believe them to rest altogether on a basis of wrong principle. The State, in licensing a man to practise medicine, need, I think, trouble itself only with two questions: (1) is the candidate of an age for undertaking civil responsibilities? and (2) is he competent according to a proper standard of competency? The first is a matter of documentary evidence; the second is for the examining authority to measure. For this, and this only, is an examining authority wanted; and the perfection of such an authority would be shown by its being able to settle this, quite conclusively and finally, without reference to any other considerations whatsoever.

Now, gentlemen, turn from these general principles, which I dare say no one will question, and call to mind the regulations to which our pupils are subject; not, observe, as to the quantity of knowledge they shall have attained, but as to the exact mode in which the attainment shall have been made. See, in some cases, how subordinate a part is held by the examination, which in a perfect system would be (except age) the sole condition; and see how very much has to be settled besides the candidate's possession of knowledge—how very many conditions of a really inessential and frivolous kind. The regulations are so well known to you that it would be idle to discuss them here at length, but I take at random a few points in order only to illustrate what I mean. Botany:—how good a thing it might often be that the student had previously learned it. Perhaps he has done so. He may have spent half his boyhood at it in the fields. But *cui bono?* If he were a second Linnæus, it wouln't help him with the Apothecaries' Company. Whether he knows or does not know the subject beforehand, equally to lectures he must go during his "first year" in a "recognised medical school"; and the lectures must be "in the summer session"; and he must take care to give timely notice to the examining court that he is in attendance on these lectures. This sort of minuteness and superfluity pervades our whole system. A professor may have written a book—say of materia medica, or surgery, or forensic medicine—a book which virtually contains all his lectures,

except perhaps the "hums" and the "haws"; yet the student may not compound by buying, or even by both buying and reading, the book. Whatever economy of money, time, and temper this compromise would represent to him—whatever better digestion he may have for written as against oral teaching, *scilens volens* he must hear, or at least must bodily attend, the speaking of this printed book, or of some exactly equivalent discourse. And all this, of course, "in a recognised medical school." And some courses of lectures must actually be attended more than once—perhaps identically the same lectures repeated: scarcely necessary, one would think, if lectures answer their purpose; and, on other grounds, still less necessary if they don't. And the College of Surgeons very particularly rules with regard to teachers (what it has not yet found expedient with regard to examiners) that no one shall be deemed competent to certify respecting any two branches of the curriculum. Gentlemen, I invite you to judge all this sort of thing in the light of a principle universally recognised in this constitutional country as the basis of all common relations of citizens to government—that *every unnecessary law is an evil*. Observe, too, gentlemen, if you please, that I have barely alluded to the machinery by which the absurd practice of compelling bodily attendances is maintained: the pedagogic census of the lecture-room, the voluminous schedules, the reiterated certificates, the manifold and exactive central registrations: wearisome necessities, if necessities they were; but how intolerable and oppressive a nuisance, when the bodily compulsion for which they provide is itself altogether illusory.

There are two points of view in which I strongly object to it all. First, as regards the student. Why should he be forced to learn in a particular way, or at a particular time, or with particular apportionments of dose? The essential thing is that he should *know*. Let him choose his own way of learning. If the examining board is an effective test of knowledge, surely it is above all things his interest to qualify himself in the best mode he can. If the regulations represent that best mode, he will need no compulsion to follow it. If they be not the best mode, *à fortiori* let them go. Judge the question by the analogous case of a recruiting officer for the army. He does not require a long schedule of his man's antecedents of diet—what oatmeal he ate in his childhood, and what eggs afterwards, and whether his beer was from "recognised" publics, and what previous notice was given of his several meals, and which were taken sitting and which standing. No: he makes his estimate of the bumpkin, such as he is, goes with thorough care over all his points, strictly judging his thews and sinews, and accepts or rejects him accordingly. The candidate for a medical licence in any country has, I think, a moral right to demand from the State this sort of examination of his merits—has a claim, I think, to be let stand or fall according to the essential fact whether he is competent to practise his profession, not according to inessential and trivial circumstances of how or when he has learnt this or that part of his business. He may fairly make appeal to "results"; and if regulations are thrown into his teeth, he may fairly answer, as Mrs. Glasse did to Scholasticus, "the proof of the pudding is in the eating."

My principal reason, however, for adverting to the matter on this occasion is that the system, in my opinion, exercises a depressing and deleterious influence on the mode of medical teaching. It tends entirely to spoil the natural competition of schools and teachers, both as with one another and as against books. No school is permitted to have anything like an individual character; every step must be in exact pattern appointed by the authorities; no teacher is fairly put on his mettle to show that oral teaching is better than print. There is something in all this which looks like what in commerce is called "protection;" but we may see here, as people have long seen in other markets of supply and demand, that "protection" may be as pernicious a gift to the "protected" as it is an unjust and impolitic treatment of the public. Our "protected" interest of the lecture-room is indeed stimulated to numerical increase; every school, whatever its aptitude, is forced to have every possible lectureship; men who would much rather be at other work must perforce lecture on subjects to which they are not inclined; and thus, as I need hardly observe, the profuse competition which is forced is the reverse of a stimulus to excellence, and one more heavy discouragement to the man who would make medical teaching his career. In the interests of medical teaching, properly understood, as also emphatically in the general interests of our profession, and in the still larger interests of the public, what I would wish to see as the system of our medical schools would be an entire freedom of choice; that no one should enter them upon compulsion; that every one who enters should enter only because the commodity which he wants is better supplied to him in that market than in any other market. And similarly with our individual lecture-rooms, I would wish that no one should encumber our benches who comes otherwise than by free will, coming for something which neither books nor unassisted observation can give him with equal facility and completeness.

If asked where I would draw my line in this matter of regulations, I answer—subject to one very important qualification—that I would have no line. *If I could assume the thorough efficiency and disinterestedness of our examining boards*, I may say for myself that I would be well satisfied to look to the *stringency of the examination as a substitute for all regulations whatever*, and would admit to be examined, with a view to registration, *anyone who had arrived at the age for undertaking civil responsibilities*. Looking to the University of London as incomparably the best-constituted of our examining boards, I most sincerely wish that it could be induced to try the experiment of examinations conducted upon that principle. "But," I may be asked, "would there be no chance of passing candidates who had not been properly educated?" I answer by another question: What is the object of the examination, but to test whether there has been "proper education"? If the examination cannot test that, what is it for? If it can test that, why continue the regulations? I can suppose the belief of those who enact them that they are advantageous to the student, and enable him to attain higher competency in equal time, or equal competency in shorter time, than other arrangements which he might for other reasons prefer; but, as I have already said, if an uniform test of competency were strictly and skilfully applied, surely students, if that supposed advantage be real, would not fail to discover it. Human nature is commonly believed capable of knowing on which side its bread is buttered; and there seems no particular reason why medical students, if option were allowed them, should not choose what is manifestly to their advantage. The real difficulty, I suspect, lies in a very different direction. The regulations, I can well conceive, may represent the misgivings of those who have enacted them as to the sufficiency of their powers of examination—misgivings which assuredly in some cases are well founded; and thus far, they are forced upon our acceptance as part of the bad system against which I have raised my protest; innumerable vexatious rules to supplement ineffective examinations; stones given us when we ask for bread, and empty forms instead of living energy.

Gentlemen, I must both apologise to you for the length at which I have spoken, and thank you for the kindness with which you have listened to me. The views which I have expressed, and which I am glad to know are shared abundantly by men of whose concurrence I may be most proud, are, I well know, not views on which any effective action can now be taken by our Association. Our proceedings at present are of detail. But I think I should not have done justice to the position in which you have done me the honour of placing me, if I had not, at this first opportunity, expressed the very strong opinions which I entertain as to what are the real stumbling-blocks in the way of medical education in London. And I will venture to add, that however hasty (from unavoidable causes) may be the form in which my opinions are expressed, the opinions themselves are at least so far not unworthy of your acceptance that they are the results of long experience and very earnest consideration in the matter.

PROFESSOR HUXLEY BEFORE THE ACADEMY OF MEDICINE OF PARIS.—M. Broca has presented, in the name of the translator, M. Dally, Professor Huxley's work "On the Place of Man in Nature" to the Academy of Medicine of Paris. M. Broca stated that M. Dally had not only translated the book, but had almost doubled its size by numerous notes containing an account of the recent improvements of prehistoric anthropology, and an important introduction, in which the doctrine of the transformation of the species is treated in a masterly manner.

SELF-MUTILATION.—The "Gazette des Hôpitaux," of December 31st, 1867, publishes the case of a French serjeant who, at the Camp of Châlons, during a fit of despondency, removed, with a pocket-knife, both penis and scrotum, with its contents, close to the pubes. The hæmorrhage was fearful; but M. Sourier, military surgeon, by dint of care and perseverance, succeeded in obtaining eventual cicatrisation. He considers that the patient is likely sooner or later to commit suicide.

THE SANITARY HISTORY OF THE BRITISH ARMY IN INDIA, PAST AND PRESENT.

BY SIR J. RANALD MARTIN, C.B., F.R.S.,
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No. IV.

Nature of Fatal Diseases in India, and of Attacks of Sickness.

1. The results of all investigation in India show clearly how much of the sickness and mortality is due to a few acute diseases, which are rendered fatal by well-known causes.

2. Quoting a statement submitted by the author of this history, the Commission reports that the great endemic diseases of India—those which injure the constitution or destroy the life of the British soldier—are fevers, dysenteries, diseases of the liver, and epidemic cholera, which has for many years engrafted itself on the endemics of the country. Compared with these all other diseases are of minor extent and importance.

3. Of the various obstacles which bar the colonisation of the white man in tropical regions, and of the many causes which reduce the strength of our armies there, remittent fever, he says, is the principal.

4. Remittent fevers are found almost everywhere throughout the East Indies, varying in their intensity and in their complications according as they occur in deltas, along marshy banks or at the embouchures of rivers, in plains extending from the bases of mountain ranges, termed "taraees" in partially inundated or irrigated lands, or in tracts traversed by percolating streams or occupied by jungles, or in certain low hilly countries.

5. The seaboard, especially where there is jungle or salt marsh, and the adjacent islands when of a jungly or marshy nature, are peculiarly pestilential; and so are often drying-up marshes and the drying-up beds of rivers.

6. The four diseases mentioned are almost exclusively diseases of the sultry plains of India, and when any of them are found in the elevated lands, they are generally modified in degree and reduced in proportionate frequency—certain forms of bowel complaint, when the sufferers are removed from the plains to the high grounds, being the only exceptions.

7. Even in regard to cholera, the most acute of all diseases, while the proportionate mortality of those attacked is everywhere the same, the proportionate numbers seized in high and in low situations differ most widely. Cholera, as well as the endemic diseases of the plains, are, in general, of rare occurrence in the elevated ranges of India, where the air and water are comparatively pure.

8. On the plains of Bengal proper, out of a British force of 25,431 men serving for eight and ten years respectively in Calcutta, Chinsurah, and Berhampore, there occurred 13,596 cases of fever; while in the healthier upper provinces of the same Presidency, with diseases generally of a less degree of severity, out of an average British force of 23,731 men serving there during seven years, there occurred 14,159 cases of fever; and throughout India generally 50 per cent. of all the admissions into hospitals were from fevers.

9. Lower Bengal has at all times been unfavourable to European health; and out of the above force of 25,431 men serving there, there occurred 8499 cases of dysentery and diarrhœa.

10. Out of an aggregate British force of 211,993 men serving in the Presidency of Bengal from 1812 to 1832, there were admitted into hospitals on account of diseases of the liver 14,015 cases, with 924 deaths; while out of an aggregate force of 331,775 men similarly placed, from 1833 to 1854, there were 18,765 admissions and 1345 deaths from liver diseases.*

11. Comparing the deaths of British soldiers for periods of sixteen years (1830–45) in Bengal and for seven years (1848–54) at home, the annual rate of mortality was 10 per 1000 in England, and 67 per 1000 in Bengal, of which 58 per 1000 were by zymotic diseases.

12. The fevers—ague, remittent and continued—killed 17 men in 1000 in Bengal; dysentery and liver diseases, 20; cholera and diarrhœa, 18.

13. One thousand British soldiers at home experience about a thousand attacks of sickness in the year; but in India the soldier's sickness was doubled. To one illness of the labourer, the soldier was liable to four of at least equal severity.

14. Thus, from a return supplied by Dr. Balfour, it appears that the 16,850 troops serving in Bengal furnished the hospitals with 172,388 cases in the five years 1850–54, when 4461 cases terminated fatally.

15. A battalion of 1000 men sent yearly, on an average, 2045 cases to the hospitals; each soldier in India was exposed, therefore, to two attacks of illness in the year instead of one.

16. The returns furnished by Sir Alex. Tulloch showed that in the troops of the line the attacks of sickness ranged at the different stations from 988 to 3225 per 1000 men.

17. The attacks of sickness were sometimes slight; but in a large number of cases they were severe, painful, and fatal.

18. Even from the facts and circumstances here briefly stated it must be evident that, over a wide extent of years, there occurred throughout India an enormous amount of unnecessary and preventable disease, suffering, and death, to the great loss and reproach of the country.

19. It is the neglect of every-day dangers that has cost us so many lives there, and this fact ought continually to be present to the recollection of the authorities, civil and military. In actual warfare the soldier is compelled to disregard many exceptional dangers from climate, but he is never justified in omitting to provide against constant and uniform danger. Until this principle is carried out in sanitary matters, the sickness in our army in India must continue to be a burden and a discredit to us.

Lives wasted in India in each Year of Service.

1. The mean term of service in India, immediately deduced from a table, was 8·6 years, and 11 recruits were required annually to every 100 men. To maintain an army of 85,856 men, 10,000 annual recruits would be required, even if the term of service were as prolonged as it was under the late Company's regulations. The recruits entering were reduced to less than half their original number in eight years; their probable term of service was, therefore, between seven and eight years.

2. A return handed to the Commission by General Russell threw some light on the reductions. Out of 1064 non-commissioned officers and men of his regiment (the 84th), who landed at Moulmein in 1842, only 93 landed in England on its return in 1859; thus, the numbers were reduced from 1064 to 93 in seventeen years, and the regiment was almost completely renewed in India. It was joined by 1248 recruits, and the deaths were 817.

3. Now, had the mortality been uniformly 5 per cent. per annum (and the witness said it had been 3 per cent. for fourteen years prior to 1857), the original numbers would only have been reduced in this case by death to 455. There are, besides death, many casualties which reduce corps serving in India, and they require to be carefully adverted to.

4. In tables furnished by the Commission it was shown that 100,000 men were reduced to 9604 in twenty years of service by 90,369 casualties of every kind.

5. In the course of service there occurred 40,447 by deaths, 14,627 by invalidings, 3558 by purchasing their discharge, 8972 by the expiration of their terms of service, 968 by promotion, 5724 by transfers to the Town Major's list, 13,976 by transfer to other corps, 1818 by desertion, and 306 by other causes.

6. Half of the deaths (21,499) took place in the first five years of service, and the numbers invalided increased slightly in each quinquennial period.

7. The decrement, year by year, of the British force serving in India was shown in another table, in which it was seen that 1000 effectives had been reduced to 96 in twenty years. Now, the 1064 men of the 84th were reduced to 93 in seventeen years; and this, while it agrees very closely with the tabular results, points to the fact that the Queen's regiments were reduced more rapidly than the Company's by the shorter terms for which the men enlisted.

8. The half of a regular army so constituted consists of men who have served less than six years, and not more than a fourth of the men are veterans of ten years' standing, on whom the discipline and solidity of an army greatly depend.

9. It is evident that the recruiting is more difficult, and that the losses from other causes than death are greater, in an unhealthy than in a healthy army; for the invaliding, the desertion, and the discharges from all are influenced by sickness.

10. The Commission constructed two tables, the one showing how the same number of recruits (100,000) would be

* Evidence of Sir J. R. M.

reduced year after year by death alone, and the other showing the reductions by death and invaliding together.

11. By death 1000 would be reduced in twenty years to 344; by death and invaliding to 216; by death, invaliding, and other causes, as we have seen, to 96.

Influence of Term of Residence in India on the Rates of Mortality.

1. This subject involves the important question of acclimation. The Report of the Commission presents a table in which the facts are arranged with reference to the soldier's years of service, and it is evident that the mortality (65·2) during the first year of service was higher than it was subsequently.

2. It decreased gradually, and became sensibly less in the fifth year, 44·1; it then rose slowly to 47·0 at the second quinquenniad (5—10); 52·8 at the third.

3. The reduced number, 43·0, at the fourth period of residence (15—20 years) arose probably from the elimination of the sickly by invaliding, which then became active (6 per 100).

4. This, however, although it took away a fourth of the numbers annually, did not prevent the mortality, partly from advancing age, rising to 62·5 per 1000 in the last period of service.

5. It is evident that when men are exposed to the operation of very unhealthy places many of the weak are cut off at once; while of the survivors some are exceptionally less capable of resisting the local poison, and others are so enfeebled by its influence that they rapidly succumb.

6. These two sets of causes in conflict were nearly in equilibrium in India, so that the mortality always remained high; and if acclimation in the ordinary sense took place, it was at advanced ages.

7. The causes which during a hundred years destroyed British soldiers in India, like arsenic or any other poison, did their fatal work in every year of age and of residence; and, indeed, the zymotic agents which produced cholera, dysentery, liver disease, and fever in all its forms, comport themselves like organic poisons.

8. This view is confirmed by a new combination, in which a table shows the mortality in different years of service amongst those entering India early and late in life; but, upon the whole, early entry into India appears to be an advantage, not only at first, but in after-life.

9. It is further evident, from a comparison of the mortality in the several corps and presidencies, that the mortality in India depends on the intensity of the zymotic poisons, and the time at which the men are exposed to their influence, rather than on the incident that they have resided one, two, ten, or more years in the climate of the tropics.

Acclimation.

1. Sir Ranald Martin states, that all statistical observations go to disprove anything like acclimation in the East Indies. On the contrary, he says, disease and death increase with length of service and age.

2. The opposite opinion seems to have arisen from the circumstances that some men have learned by experience the art of managing themselves, and so of preserving their health in unhealthy districts, and partly from confounding the effect of heat and moisture (i.e. climate) with that of local sanitary condition. There is acclimation to heat, there is none to "endemic miasmata."

3. We have already shown, statistically, the influence of length of residence in India on the rates of mortality amongst soldiers; but there has been considerable difference of opinion as to the effect of acclimation on the health and efficiency of troops.

4. It has been stated, on the one hand, that men get accustomed to the climate by length of residence; and hence, that there is hardly a period, so far as health is concerned, to which their term of service should be limited.

5. Others, again, have arrived at an opposite opinion, and one much more in accordance with observed fact. Dr. John McLennan, when asked whether a man of one year's service, or of ten years' service, would be the more able to endure exposure and fatigue, answers, "The fresh man decidedly."

6. Colonel Greathed says:—"I believe that the medical officers will say that the longer a man remains in India the worse he gets; and I believe there can be no doubt of it. I do not believe in acclimatising."

7. "For the first five or six years a soldier is a very good man indeed in India; but after that he begins to break down, and he is not so good a man as he was."

8. The whole nature of the evidence in the statistical reports is against the doctrine of acclimation, as generally understood, and in favour of limiting the period of service in India to about ten years. It does not, however, necessarily follow that this limit need be maintained, if the sanitary condition of the troops be improved, as it may be.

ON THE

THEORY OF ALCOHOLIC STIMULATION IN PYREXIAL DISEASES.

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RECENT researches have made it necessary that the theory of stimulation in febrile diseases should be reconsidered, from its very foundation. The alimentary properties which had been entirely denied to alcohol by Lallemand, Duroy, and Perrin, are now shown to be very probably possessed by that substance. But the more clearly this probability is brought forward, the more likely will it appear, on reflection, that its employment may be highly serviceable in some cases, and useless or hurtful in others of the very same disease; and that among the cases where it acts beneficially there may be great variations in the quantity required.

The opinion to which I have always adhered as regards the destiny of alcohol in the organism appears now to be established by such a weight of corroborative evidence as to be put altogether beyond question. The assertion of the French observers, that alcohol is demonstrably eliminated, unchanged, in such large proportions as to warrant the inference that the whole dose taken is thus disposed of, is now satisfactorily disproved. This might fairly, I think, be said to have been done by the numerous experiments made by Dr. Dupré and myself. But the elaborate researches of Dr. Schulinus (vide *Archiv der Heilkunde*, 1866), which I had not seen at the time when my lectures were delivered, afford an independent support to the proposition which is not to be gainsaid. Henceforward the notion that ingested alcohol is got rid of in bulk, unchanged, must be definitely dismissed. Dr. Schulinus takes the extreme case of highly intoxicating doses administered to animals. He kills the animals within a few hours after the administration, and shows that while a trivial fraction only of the alcohol has escaped in the urine, a notable proportion, probably not less than one-fourth of the total quantity ingested, has ceased to be recognisable in the body *as alcohol*. Now, as the kidneys are certainly the chief channel for whatever elimination occurs (when the animal experimented on is quiescent), this amounts to a demonstration that a large disappearance of alcohol has taken place without the intervention of elimination. This being the case, it is needless to add that the missing portion must have been decomposed. It is clear that even in circumstances of downright narcotic poisoning by alcohol it is not by elimination of the poison, but chiefly by destructive decomposition of it, that the organism is enabled to recover from its depressing effects.

It is mainly, however, with the results which follow the use of non-intoxicative doses—i. e., of doses which do not produce even the slightest of the symptoms of narcosis—that we are concerned. I have striven to defend myself, on all occasions, from the possibility of being supposed to recommend the *narcotic* use of alcohol, either in health or in disease. Even the slight and trivial symptom of flushing of the face is a sign of a first degree of the poisonous action—viz., a vaso-motor paralysis,—and shows that at least we have touched the border line at which the beneficial action of alcohol ceases, and its poisonous effects begin. But I have equally maintained, and still maintain, that it is quite impossible to argue *à priori* in diseased conditions, especially in pyrexia, as to the effect which a given quantity of alcohol will produce; and that relatively to the altered condition of the system in some forms of pyrexia, twenty ounces of brandy in twenty-four hours may prove no more narcotic or poisonous than two ounces might be to a person in health, or to the sufferer from a different type of pyrexial disease. As a matter of repeated observation it has become perfectly plain to me that the larger dose may, in a suitable case, produce less tendency to narcosis than the smaller dose would

produce in a case of that kind which tends to run a simple and uncomplicated course towards spontaneous recovery.

Before proceeding further, it will be well to summarise the remarkable results at which we have now irrevocably arrived with regard to the effects of non-intoxicative doses of alcohol taken in health. It has been proved by the uniform result of a great number of experiments by Dr. Dupré and myself, that when a dose of wine, spirit, or beer, not containing more than one ounce and a half of absolute alcohol, is taken—more especially if it be taken in divided doses—the total elimination by the kidneys does not amount to more than a fraction, probably never more than half, of a grain, and that the elimination by skin and lungs is probably less. It has been proved also, that in certain cases of pyrexial disease only the same fractional elimination is produced when very large doses of alcohol are given; but this absence of notable elimination appears to be only observed when the dose (whatever its magnitude) has diminished the frequency of the pulse and the other signs of pyrexia, without producing the least stupor, flushing, or other signs of narcosis. On the other hand, a large amount of evidence has been adduced to show that, both in health and in febrile disease, a dose of alcohol, *whatever its amount*, which produces any signs of narcosis, immediately causes unchanged alcohol to be eliminated in notable, though still not in large, quantities in the urine.

Since the publication of my lectures, I have been gratified by receiving additional evidence, from independent sources, which is confirmatory of these views. One very striking case I may mention here. Dr. Handfield Jones was good enough to ask me to examine the urine of a fever patient, to whom he had for some days been administering the very unusual quantity of twenty-eight ounces of brandy per diem; and this without producing the least narcosis, but, on the contrary, a marked improvement in all the symptoms. Dr. Jones had distilled this man's urine, and failed to find *any* alcohol in the distillate. I repeated the operation, with much care, and succeeded in detecting only a very minute quantity; certainly not more than would have been present in the urine of a healthy person after an ordinary moderate dose.

I invite the profession to repeat these experiments for themselves in all cases where large doses are given. The mode of research, as described in my second lecture at the Royal College of Physicians,* is not difficult; and, at any rate, every hospital physician might carry it out with perfect ease in a large number of cases of febrile disease. I believe it will be found that the narcotic or injurious action of alcohol may be immediately detected by the distillation of an average sample of the twenty-four hours' urine: if renal elimination to the extent of one grain per diem be proved, I believe that we may confidently assert that a more or less poisonous effect has been produced; more especially if the sphygmograph gives the evidences, detailed in my first lecture†, of lowered arterial tension.

It is impossible any longer to deny or ignore the fact that alcohol is a food. The quantities in which it can be taken without producing visible toxic effects would alone establish this, unless we were at liberty to suppose that it was rapidly eliminated in bulk. But this elimination is now finally disproved. And the fact of its destructive decomposition in the body is thereby proved; for, although the resulting compounds have not yet been traced, a denial of the fact of decomposition would shut us up to the monstrous hypothesis of a progressive accumulation of unchanged alcohol in the blood and tissues. Upon no rational theory can the title of aliment be denied to a substance which is daily consumed in such considerable quantities by vast numbers of persons without any perceptible ill effect; which disappears within the body, and by irresistible inference must be presumed to be decomposed there, though in a manner as yet unknown; which visibly and sensibly adds to animal and organic energy, when taken within certain limits, and which even, in exceptional circumstances, can support life unaided for a considerable period.

But if alcohol be a food, under what class of foods can it be catalogued? By chemical composition it is a hydro-carbon. According to the theory of Liebig it should be a generator of animal heat. This is certainly *not* its immediate effect, for the researches of Dr. Ringer, which my own observations entirely confirm, have demonstrated that it steadily *lowers* the animal temperature during some hours, and to a slight degree. I need scarcely remind my readers, however, that the experiments of Edward Smith, and those of Fick and Wislicenus, even with the modifying corrections to which the latter have been subjected by the careful inquiries of Professor Parkes, have conclusively set aside the alimentary scheme of Liebig. It seems clear that one great function of the carbonaceous foods is the direct generation of motor muscular force by their destructive decomposition. And here comes in a new fact, observed by Schulinus, which is highly interesting. Schulinus proves that the general belief—which was especially supported by Lallemand, Duroy, and Perrin—that alcohol accumulates chiefly in the nervous centres and the liver, is erroneous. On the contrary, it appears that the diffusion of alcohol in the body is uniform; or rather, if anything, that the blood contains more, in proportion, of this substance, after ingestion, than any other part of the organism; and that alcohol is also distributed to the muscular tissues as plentifully as to the nervous centres.

With the knowledge of these facts, it is plain that our search for the oxides of alcohol must be entirely recommenced, and this time with the *certainty* that, however long or difficult, it will be at last successful. Every part of the organism, and every secretion, in which we may expect to find the material products of a force-producing decomposition of a hydro-carbonaceous food must be explored; nor am I without definite expectations of success in a particular direction, which I need not at present indicate. On the present occasion, it is particularly desirable to show of how little worth is the argument, so frequently urged against the alimentary character of alcohol, that it does not immediately increase animal temperature. A most important series of researches by Dr. Ringer, which he has kindly allowed me to read in anticipation of their publication, conclusively proves that even the most undoubted and typical foods are, equally with alcohol, entirely devoid of any heat-producing qualities, at least during several hours after their ingestion.

The force which is evolved by the decomposition of food in the body does not appear in the first instance to take the form of caloric, except to such an extent as may be necessary to maintain the animal temperature without serious loss. There is no reason, therefore, why the decomposition of alcohol may not be as truly productive of organic and animal force as is that of any other food. Let us examine, in the light of this probability, the facts of a case like that remarkable one which I have quoted from Dr. Handfield Jones's practice, in which so large a quantity of brandy as 28 oz. daily was taken, with the simple effect of raising vital power and calming febrile excitement. In such a case one cannot but suppose that for practical purposes the whole of this large quantity of alcohol was rapidly decomposed, with the immediate effect of generating force; since almost none of it appeared unchanged in the secretions; whilst, on the other hand, its retention as alcohol in the blood would necessarily have produced visible narcotic depression of the nervous system in the highest degree. Considering that in a patient suffering under the acute stage of fever scarcely any bodily functions but those of organic life are going on, one must suppose that the force produced by the decomposition of the alcohol would be applied mainly to the maintenance of function in the muscles of organic life, the organic nervous centres, and in the secreting glands.

These functions are necessary to life, and, in the absence of assimilable food, the force required for their support must have been obtained at the expense of destruction of tissues. So much, therefore, of the alcohol given as could be applied to this economic process must be considered as directly preservative of the integrity of the organism, and in favour of the patient's chances of life. On the contrary, an excess of alcohol remaining unchanged in the blood must tend to act as a direct depressant to the nervous system; in the absence, therefore, of narcotic symptoms, one must conclude that such excess did not exist in any important degree.

There is another mode, ingeniously suggested by Dr. Barnes (see THE LANCET, vol. ii. 1867, p. 502), in which it is possible that alcohol is utilised within the body in certain acute diseases. Alcohol is an antiseptic of considerable power, and it is quite possible that in certain virulent fevers it may exert that kind of influence upon certain morbid matters in the blood, the rapid oxidation of which is producing or maintaining the severity of the symptoms.

If we now examine the symptoms which are produced by an excessive or untimely administration of alcohol in febrile disease, we shall find them to be all explicable on the supposition of a poisonous action of unchanged alcohol on the nervous system; whether exerted directly upon the nervous tissues, or indirectly through damage to the blood. The earliest symptoms of narcosis appear in the vaso-motor system, as evidenced, for instance, by flushing of the face and increased rapidity of the heart's action from diminution of the arterial

* Vide THE LANCET, vol. ii., 1867, p. 190. † Ib., vol. ii., 1867, p. 35.

resistance. Simultaneously with, or even before, the occurrence of these symptoms, the increased elimination of alcohol commences; and one can scarcely doubt that this is due to vaso-motor paralysis, allowing distension of small vessels and an increased excretion of water, carrying with it an accidental excess of alcohol, which betrays itself to the discrimination of the chromic-acid test. On this supposition the discovery of a notable excess of alcohol in the urine above that observed in the case of healthy and temperate persons, may be reasonably supposed to mark the first stage of the poisonous action of alcohol. And, if this be true, its value as an indication for the omission or diminution of the wine or brandy must be considered very great. It is a far more accurate test of a harmful action of alcohol than mere increase of pulse-frequency; for this may be due to natural phenomena of the disease.

I think the adoption of a purely chemical test like this, and of a purely physical test like the estimation of arterial tension by the sphygmograph, would be very much more likely to settle the dispute as to what is the proportion of cases of acute disease in which alcohol is useful, and what are the doses which are appropriate to particular stages of the disease, than any other kind of investigation. But, indeed, I do not expect that any hard and fast average line can be laid down; my very case is, that every fever or pneumonia patient must be treated according to his own special symptoms, and that these symptoms must be appreciated by accurate methods of observation. Such phenomena as mere redness or heat of skin, which some rely on, are simply no indications whatever, either for or against alcohol, until it has been tried. Greatly lowered arterial tension is a rational indication for alcohol; and if the experimental administration of the latter heightens tension, the treatment will be sanctioned *pro tempore*. And if the first twenty-four hours' urine gives only the signs of minute elimination of alcohol the sanction will be confirmed. On a future occasion I shall endeavour to show that the statistical arguments which are frequently brought forward against the use of alcohol in acute disease are of necessity misleading, and are infected with sources of fallacy which render them valueless.

Wimpole-street, Jan. 1868.

A CASE OF PIROGOFF'S AMPUTATION AT THE ANKLE, WITH A NEW FORM OF ARTIFICIAL FOOT.

By CHRISTOPHER HEATH, F.R.C.S.,

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THE following case of chronic disease of the foot, ending in amputation, illustrates the various phases which the disease may undergo, and the illusory hopes of cure without operation which may from time to time sustain both the patient and the surgeon. In selecting Pirogoff's amputation as the final remedy, I was influenced by my experience of the admirable results which that operation affords in cases where the os calcis is sound, and the ease with which the operation itself is performed. Without depreciating Mr. Syme's operation, which, when done in strict accordance with his directions, answers admirably, I am convinced that Pirogoff's is the easier proceeding, and that, when properly performed, the result is incomparably better than after Chopart's amputation, the shortened foot of which is an inconvenience both to the patient and the instrument-maker, who has difficulty in obviating pressure upon the extensive cicatrix.

In the performance of the operation, so long as the os calcis and the malleoli are cut obliquely in opposite directions (as originally proposed by Mr. Tudor), I think it a matter of no importance whether the calcaneum be sawn from above or from below, and in fact am in the habit of teaching the two methods alternately to my pupils; but in either case it is important to reflect the tissues slightly before applying the saw, so as not to leave too much bone in the flap. I much prefer opening the ankle-joint to removing the foot with the malleoli, as has been recommended. The amount of suppuration following the operation is exceedingly small if the cut surfaces of the bone lie in easy apposition, and especially if, as in this case, the solution of chloride of zinc, recommended by Mr. De Morgan, be employed.

Mr. H. W——, aged sixteen, came under my care in April, 1866, with well-marked disease of the transverse tarsal joint, the result of an injury to the foot two years before, which had been lighted up again by a sprain two months since. The synovial membrane of the joint was much swollen, but there was no fluid; the foot was hot and swollen, and the patient could not bear his weight upon it. I strapped the foot with twilled calico plaster, and ordered him to procure a pin-leg with a support for the knee, so as to keep the foot off the ground. By the middle of May there was evident fluctuation, and I therefore had a moulded leather splint fitted to the foot, so as to keep it perfectly quiet, and opened the abscess below the external malleolus. From this incision feeble granulations sprang up, which were dressed with iodine lotion, and he took the syrup of iodide of iron. In September, after some weeks' absence in the country, three openings had formed below the *inner* malleolus, each of the size of a shilling. No dead bone could be detected at either side by a probe, which passed deeply between the bones of the tarsus. He now took cod-liver oil, and used a nitric-acid lotion to the sores. Under this treatment the foot made slow but steady progress. A small piece of bone came away in November, and by February, 1867, the wounds were nearly closed, and the foot had become more shapely. The patient could bear a good deal of weight upon the foot without pain, but still employed the splint and pin-leg by my direction. Early in April, however, a swelling appeared in the sole of the foot, near the metatarsus, which I opened; but two other openings formed spontaneously, and the patient's health began to give way. He spent May at the seaside, but at the end of that month I found a threatening of an abscess on the dorsal surface of the metatarsus. In June, though the general health had much improved, and the patient had gained weight, his foot was worse, all the old sinuses having reopened, and a fresh one formed on the inner side. The swelling over the metatarsus had not increased; but a fresh point of fluctuation was present on the inner side, near the ankle-joint. No grating was present in the joints. Under these circumstances, I requested a consultation with Mr. Erichsen, who entirely agreed with me as to the propriety of an immediate operation.

I performed Pirogoff's amputation on the 15th June, with Mr. Erichsen's assistance, opening the ankle-joint, and sawing the calcaneum from above in a slanting direction. At one part the cut surface looked a little congested, and I therefore took a second slice. The surface of the wound was bathed with a solution of chloride of zinc (forty grains to the ounce), and the flap came readily into apposition, being retained by a few sutures, and a strap of plaster beneath the heel.

The foot after removal showed advanced disease between the astragalus and scaphoid bone, but little between the calcaneum and cuboid. The ankle-joint was healthy, except that the articular cartilage of the astragalus was discoloured on one side, opposite the last-formed abscess. There was a large abscess above and below the metatarsal bones, two of which were bare.

Mr. W—— made an uninterruptedly good recovery, and was able to go on to the sofa on the tenth day. On the twelfth day he stood up and walked a few steps, with the limb supported on his old pin-leg. A fortnight after the operation he went to a relative's house at Ealing, a part of the incision having skinned over, and the remainder having granulated healthily. On the 2nd July I found him greatly improved in personal appearance, and the wound making good progress; but a small abscess had formed an inch above the healed incision on the inner side, which I opened. By the end of the month the wound was quite healed, and the stump perfectly sound and able to bear any pressure; but the sinus remaining from the abscess still slightly discharged. He returned to his home in the country, and came up in November to see about an artificial foot, which Mr. Pratt, of Oxford-street, contrived with great skill, so as to obviate the unsightly thickening of the ankle often seen in apparatuses of the kind, the foot at the same time being light and inexpensive, and enabling the wearer to walk in an easy and natural manner.

The apparatus (Fig. 1) consists of a leather socket, carefully moulded to the lower part of the limb, well lined, and made to lace up the front; the round aperture shown in the drawing being made to obviate any pressure on the site of the sinus

already described. The foot part is made of soft padded

FIG. 1.

FIG. 2.

leather, so that a boot may be easily drawn over it, and its softness does away with the uncomfortable "wooden-leg feel" sometimes experienced by a living foot on coming in contact with an artificial one. The sole is made of stout leather, and from it a double spring (Fig. 2, A) passes beneath the foot and behind the leg, to be attached to the socket. This gives ample elasticity in walking, and prevents the toe catching on the ground; whilst a pad of thick india-rubber (B) beneath the heel prevents any shock being transmitted from that part.

Cavendish-place, January, 1868.

SOME CONTRIBUTIONS TO THE PATHOLOGY OF FIBROUS TUMOURS.

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(*Concluded from page 44.*)

THE preceding group consists of cases remarkably resembling each other in many important respects, and, as relating to the surgery of the disease, deserves especial attention. But fibrous tumours of similar intrinsic characters occur where they are neither complicated with muscle, tendon, or bone, or contiguous to arteries of first-rate importance. They are found in the midst of glandular structure, as in the parotid and mamma, of which the two following are examples:—

CASE 9.—A girl, aged seventeen, who was under the care of my friend and colleague, Mr. Kempe, had a tumour evidently imbedded in the parotid. It was removed on April 29th, 1863, with a considerable atmosphere of gland, with which its capsule was intimately connected. Its section showed a dense white homogeneous surface, similar to the cases already related.

I apprehend that these tumours, when situated in the parotid gland, have been denominated "parotid tumours," as if they were a distinct species; but I would beg to refer to Case 4, where a tumour, similar in all essentials, was situated under the jaw, in the midst of muscular structure, and in close contact with the pharynx.

CASE 10.—A healthy young woman had a tumour about the size of a small marble, oblong, situated in the upper part of the left breast. It was very free, and gave the idea of a fibrous tumour. I operated on August 22nd, 1857. Of course there was no intention of removing the mamma. It was found imbedded in the gland. It had a distinct capsule, and its section was nearly white and solid. The preparation is in the museum.

These two cases are given merely to show that fibrous tumours, precisely similar in character to those in the first group, occur in glandular structure, quite independent of any other condition, but may be modified in some slight degree by the influence of adjoining tissue, a circumstance which, I believe, applies to all tumours. I have seen the tumours, probably originating in gland, extend themselves to the neighbouring muscular structure: thus, from the parotid to the masseter muscle, in a case operated upon by Mr. Kempe on May 18th, 1861.

In addition to pure fibrous tumours, we have them variously combined, but especially as fibro-cystic. These are frequent in the female, as in the mamma, ovaries, and uterus; also in the male, as in the testes. But it would be superfluous in me to offer any observation on a class of tumours which have been so well described of late. I must, however, be permitted to indulge in a very natural wish to make a well-deserved mention of a son, who had begun a most promising career, to be ended but too soon. The case was one of an immense fibro-cystic sarcoma, occupying a large portion of the external and internal lower region of the pelvis in the person of a girl, aged twelve, and stated to have existed from birth. There was no pain, but great discomfort; no impediment to the passing of the faeces. An oval incision removed a portion of the skin on the external part. There was some difficulty in dissecting it off the adjacent skin where pressure had caused it to adhere; in other places, where fat had interposed, it was easy. The tumour was attached to both sacro-sciatic ligaments, but chiefly to the left. It had passed into the pelvis extensively, and protruded the os coccygis largely. It lay in close contact with the rectum, from which it was dissected, and when removed left an enormous chasm. To the wet preparation preserved in the museum, the following description is appended:—"That it was included in a complete external case of fibro-membranous envelope. Internally, there were many cysts enclosed in a thick fibro-membranous case. Within these were the most varied substances. One contained a large quantity of fluid, resembling red currant jelly and water, which sprung out when the cyst was punctured. One contained a considerable quantity of green, glairy fluid. One contained a fluid resembling thick glairy pus. Several small ones not opened. There was a mass of dense fibrous structure; another mass consisting of what closely resembled cartilage of ossification. The matrix varied a good deal, but was of a mixed fibrous and adipose structure." She perfectly recovered.

The measurement of the cast taken before the operation was as follows:—Circumference, eighteen inches; greatest length from left to right, nine inches; transverse, eight inches.

I need not say that to have removed a tumour of such dimensions, and so situated, without wounding the intestine, which was so largely bared, or the arteries which cluster around the sacro-sciatic ligaments, required no little dexterity. I shall only remark that it must be a question where this tumour originated. I have notes of others which were under the care of some of my friends, and seem to have sprung from the tuber ischii or the ligament, and I suspect this must have originated in a similar situation.

It would be superfluous to offer any observations on the general diagnosis of fibrous tumours, so much has been lately done, and so ably. But in illustration of the diagnosis of this particular class with which we have been engaged, I will offer a few remarks, because it is clear to me that if their diagnosis had been generally understood, we should not see so many cases of the gravest description allowed to attain such a size, when their removal involves the most serious risk of life, or may be an impossibility. I am satisfied that the cause has been, that they have been mistaken for scrofulous glands; although so many circumstances denote the nature of the latter that, if fully investigated, the mistake could hardly occur. For constitution generally shows the character; so does the fact that the swellings are often multiple; so does the other fact, that scrofulous glands frequently vary in size, which these tumours never do, but to increase. The deep connexions of these tumours, when at all large, also indicate their nature.

It may be right to offer a few further remarks with regard to the capsular investments of fibrous tumours. They form a very important part of their organisation; they, together with the globular character of the tumours, constitute the ordinary distinction between fibrous tumours and cancers; they seem to limit the influence of the fibrous tumour, while the absence of any such limit in cancer allows them to taint all the surrounding tissues to an indefinite extent; and in proportion as the capsule is more or less perfect, it appears to me, is the *probability* of the disease being localised. The exact relation of these capsules to the substance of the tumour within, and also to the tissues without, with which they are connected, may perhaps have been specially described, but I am not aware of the fact. Their removal with the tumour at all events ought to be complete. The capsules of fibrous differ widely from those containing some other tumours, as the adipose, which may be easily shelled out; while, with respect to these, the contiguous tissues should always be removed with them, although to a small extent only. It may also be right to observe, that in many of these cases the capsules are not only in close juxtaposition with large vessels, but are very vascular

themselves, involving a considerable amount of hæmorrhage during the operation, as in Case 8.

In reference to the operation, I may state that considerable advantage will arise from the adoption of a similar plan of treatment as in Case 4—namely, that of compressing the artery on the cardiac side, so as to keep both trunk and branches as empty as possible, not only to lessen the hæmorrhage when any are divided, but to keep the whole more out of the way of the knife.

Still, keeping in view the locality of these tumours, it is but too certain that we sometimes have true scirrhus under the jaw; but the difference in these is easily discoverable. They are the result of taint communicated from a cancer in the under lip; but it is very remarkable how seldom this taint occurs in proportion to the frequency of such cancer. I may mention that, in the course of my professional life, three instances only have occurred to me, albeit my operations on the lip were numerous; and I may add that I know of no case in which the disease recurred in the cicatrix. These three instances were those of a patient in the hospital, an officer in the navy, and an innkeeper. Before operating in these cases I had examined the glands very carefully. No doubt they were tainted, but I failed to discover the mischief; and I may add that the officer had consulted Mr. Lawrence, who strongly advised the operation. Nothing could be more horrible than the open cancer which afterwards occurred under the jaw, while the lip remained perfectly sound; nor could anything be more wonderful than that, while the excavation was deeply going on, nature still preserved life by sealing up the vessels, and pushing aside, and not destroying, the nerves on which life depended. The fact that in three only of these cases were the lymphatic glands tainted raises the question whether this arises from the less virulence of the poison in these cases, or the greater power of these glands in disarming the secretion of its poisonous qualities. For if we compare the infrequency of the taint as produced from the lip with the frequency of that which occurs in the axilla from the breast, we cannot but be struck with the great difference. Is it not possible that in the very early stage of cancer of the breast similar conditions may apply as just stated with regard to the lip? And if so, does it not legitimately follow that the removal of a suspicious tumour of the breast cannot be undertaken too early?*

To return to the diagnosis of fibrous tumours under the jaw: it appears to me that they cannot be confounded with cancer, since cancer does not seem to occur here except in conjunction with that disease in the lip. As to the diagnosis of cancer in the breast and elsewhere, although when deeply situated it may be difficult, yet in the majority of cases the implication of the skin will declare its nature to be cancer. In either case the removal of a doubtful tumour at the earliest possible period would be the prudent course; while if, in the operation, that tumour was found to possess a distinct capsule, our opinion of its nature would probably be determined, and so the removal of the whole mamma be deemed unnecessary.

Connected with this subject, it may be a question as to the possibility of dispersing fibrous or even scirrhous tumours. My own experience will hardly justify me in offering any opinion on the point; but it is very important, inasmuch as the operation is often too long delayed, in the hope that it may be rendered unnecessary. I feel it right, however, to mention briefly the two following cases:—

A married lady, the mother of several children, had a tumour in her breast, which, by a very able surgeon much interested in her case, was considered as probably scirrhous. After a very considerable period it disappeared, under the use of one part of the iodide and two parts of the lead ointment.

An unmarried lady, of middle age, residing in an adjoining county, was by very considerable authority considered to have a tumour of the same character, which also dispersed under the same plan of treatment. But they may have been merely enlarged glands, or temporary indurations, no evidence being afforded.

The subject of cancer is one of immense interest, and at present it obtains the attention of several surgeons of ample experience and great ability. There is only one remark of my own which I shall press into the service, but that remark, albeit of imperfect application, still may deserve some consideration. In the course of more than forty years' hospital practice, during which a very large number of old ulcerated legs came under my care, I cannot remember any instance of cancer of the breast having existed; and, conversely, I cannot recollect any case of a patient with mammary cancer having an old-established sore leg. The experience of one individual is far too limited to ground anything more than the suggestion that the experience of other hospitals and of other surgeons should be obtained on this point, and certainly the opinion of many as well as my own that the establishment of issues after an operation with this fact (if fact it should prove).

I may incidentally mention the plan I have pursued in removing encysted tumours. When adherent to the skin, or when the cysts are feeble, they are very apt to rupture in the attempt to dissect them out, and it then becomes a tedious process, sometimes ending in a portion of the cyst remaining; this originates a fungus, which, it is true, may be destroyed by potassa fusa. I was for many years in the habit, when such rupture took place, of squeezing out the contents, and distending it with cotton wool, which very much simplifies the remainder of the operation.

Exeter, Jan. 1868.

* Mr. De la Garde has strongly advocated the early removal of tumours, in the Bartholomew's Hospital Reports, vol. iii.

ON OZONE.

BY HENRY DAY, M.D. ST. AND., M.R.C.P. LOND.,
PHYSICIAN TO THE STAFFORD COUNTY INFIRMARY.

(*Concluded from p. 81.*)

Physical properties of ozone.—Whatever views may be entertained as to the chemical nature of ozone, it must be admitted to have certain physical properties which mark it distinctively. We have already seen, from the experiments of Soret, that it is heavier than oxygen. It is, also, quite insoluble in water; its power is intensely increased, so that air saturated with it destroys dead organic matter with great rapidity, thick india-rubber tubing is quickly eaten through by it, and ammoniacal products are speedily decomposed. In contact with ammonia, as Dr. Wood first pointed out, it forms white fumes, like white fumes of chloride of ammonium, as chlorine does, producing a specific compound or salt, an "ozonide of ammonium." We have proved, further, that it possesses a peculiar odour. Thus, in relation to weight, diffusion, chemical action, and smell, it is, at all events, a distinct body; nor can, I think, its individuality be doubted by any, until these physical characteristics are explained away.

Physiological action.—The physiological action of ozone has been studied by many observers, and with singular uniformity of results. It has been tested, in regard to its effects, upon living animals, on dead tissues, on blood, on various secretions, and on various excretions, compound and simple.

Let us first take under review the action of ozone on living animals. If a warm-blooded animal be placed in a glass chamber, and be subjected to a stream of ozonised air, the oxygen of that air having been ozonised to the twelfth part, and the influence of carbonic acid being entirely excluded, special physiological phenomena are quickly displayed. The first sign or symptom is an irritability of the mucous surface of the nostrils, and of the conjunctivæ; there is often free secretion of saliva, and even profuse sweating in those animals that exhibit sweating; there is also thirst, and dryness of the tongue and nostrils. These symptoms are succeeded by great rapidity of respiration, and soon by violent action of the heart. When the chest is auscultated in this stage, there is always dry bronchial breathing, and a whistling sound, as in the first or preliminary stage of acute bronchitis in the human subject.

The effect of the ozone being sustained, cough manifests itself, followed by secretion of frothy fluid from the bronchial surface; this is equivalent to the congestive stage of bronchitis. Finally, there is lividity of the skin of the nose, of the nostrils, and of the lips, great coldness of the surface, gasping respiration, jactitation, and death, the death being often sudden. This may be said to resemble most perfectly the exudative stage of bronchitis. This order of symptoms, or phenomena, as they perhaps had better be called, has been recognised by all experimentalists; it has been pointed out with particular care by Dr. Richardson, and my own experiments have been attended with a corresponding result. There is, however, a remarkable difference in the periods of the phenomena noticed in different animals, their order, nevertheless, being maintained in each case in which they are manifested. Guinea-pigs are peculiarly susceptible of the influence of ozone; these

animals die in an atmosphere saturated with ozone, usually in about an hour or an hour and a quarter, presenting with great exactitude the order of symptoms I have described above. Rabbits live longer than guinea-pigs, exhaling water from the lungs much more freely, and also micturating with greater freedom. Rats die very rapidly. Mice exhibit a greater tolerance. Pigeons resist the effects of ozone much longer than guinea-pigs, and may readily be taken out of the chamber in which they have been confined with guinea-pigs, apparently but little inconvenienced, at the period when the guinea-pigs are dead. If, when just removed, the chest is auscultated, the breathing, however, is found to be particularly sharp, dry, and cooing; the action of the heart being amazingly rapid, reaching even 240 beats in the minute, and the respiration being from 90 to 100 in the same time. Pigeons removed altogether from the ozone, when in this condition, will frequently exhibit the third stage of obstruction to respiration, and die. Frogs seem to have the power of resisting the influence of ozone permanently, *if* they are allowed free access to water. * * *

Morbid phenomena.—The morbid appearances presented after death from ozone in warm-blooded animals are principally confined to the respiratory passages. If an animal be killed during the *first* stage, the bronchial membrane will be found to be dry, and deeply congested at spots, the lung structure being ecchymosed, and both sides of the heart full of blood. In the *second* stage the whole lung is congested, the bronchial surface being red, the right side of the heart engorged, and the left side of the heart empty. In the *third* stage the lungs also are intensely engorged, the bronchial surface is paler and filled with frothy fluid, the right side of the heart is full, and the left side empty. In cases where animals are removed from the chamber at the beginning of the second stage, and, after some exposure to the air, subsequently die, the morbid anatomy is rather that of pneumonia than bronchitis: in one experiment that I performed the stage of hepatisation was so distinctly marked that I could not have recognised it, by the lung itself, from hepatisation of the lung in the human subject after pneumonia. * * *

If animals die in the earlier stages of the disease produced, and especially if they die suddenly in such stages, the blood is found firmly coagulated in the heart, however quickly the body may be opened after death; but fibrinous separations never seem to have been discovered, the time for such separation having evidently been too short. Cadaveric rigidity is also, in these cases, quickly developed; but when the symptoms run on to the stage of lividity, the blood will remain fluid for several minutes after death, and the absence of rigidity of the muscles is proportionally prolonged.

Relation of the above facts to certain diseases in man.—Among the several, indeed numerous, surmises as to the relationship of ozone to many diseases in the human subject, we have only one series of basic facts on which to ground any safe inference. Those facts are, that the inhalation of ozone by inferior animals produces symptoms analogous, if not identical, to the symptoms of catarrh, bronchitis, and even pneumonia, in the human subject. Hence it might be inferred that the same agent, present in the atmosphere in excess, would light up those diseases. The great question then arises, whether there is ever such an excess of ozone in the air as would be likely to create such a result. If such were the case, it would follow that man is more susceptible to the effects of ozone than inferior animals; for, in the laboratory and during experiments, although irritation of the air-passages and pain in the head may be occasioned and many symptoms like nasal catarrh occur, yet, for such an effect to be produced, there must be, with man as with the animal, an excess of ozone quite appreciable to the ordinary senses.

When to the above facts we add the great difficulty of determining the actual existence of ozone in ordinary atmospheric air, we must hesitate to accept any dogmatic conclusion in regard to ozone being a natural cause of disease. There is, moreover, this important fact to bear in mind—that, taking animals of the same species, and subjecting them to the same ozonic conditions, they suffer the same symptoms, although not in each case in the same degree perhaps. This rule should logically follow, although not necessarily to the same extent, in regard to the human family, if it, in sections or masses, were subjected to the influence of the same universal agent, which is not the fact. To put forward an analogy: if in the air, under the influence of storm or aught else, some subtle body such as chloroform could become equally diffused in quantity sufficient to influence one individual by narcotism, it will not be disputed that all other individuals breathing the same air would exhibit more or less the symptoms of narcotism. What, then, is the difference, if there be any difference? The difference must lie in what may be called individual power of tolerance of an active physical agent—a tolerance not even marked in the same individual at all times.

Another view also presents itself to the mind; it is this: if ozone really causes disease, it is quite certain that the tests we have are altogether inefficient to record its presence when it *is* producing disease, or there is some other agency at work which interferes with the physical facts, without interfering with the determinate physical action.

Finally, it has to be considered whether, in regard to epidemics especially attributed to ozone—I mean catarrhs, bronchitis, and the like—there are not other perfectly efficient causes at work to excite and create these maladies independently of ozone.

The recent report of the Registrar-General shows so definitely the influence exercised by simple variations of temperature in this respect, that really in ignoring these variations to look for more obscure causes seems like going from the real and ascertained to the problematical, without any other reason than love of novelty.

I put forward these objections, not with the mere view of rebutting theory, but with a desire to enforce a more direct proof of theories, plausible on their surface, but unquestionably open to serious objection.

I think it *possible* that, in studying ozone, admitting all the difficulties, and determined to trace out the rigid truth, we may in time discover a connexion between the presence of ozone in the air and catarrhal and bronchial epidemics; but further than this I cannot concede the point, nor admit the smallest opening towards an argument tracing any other class of disease to atmospheric ozone as the cause.

Action on organic compounds.—The effects produced by ozone on a variety of organic compounds have been found by a large body of experimentalists to be tolerably uniform, although the explanations given as to the cause or causes occasioning such effects have not been in all instances alike.

Blood absorbs ozone with great rapidity, and oxygen is at once freely liberated. This capability of liberating oxygen has been said to reside principally in the red globules, from the circumstance that, when freed from fibrin and albumen, these bodies produce with ozone this identical effect. Further: when ozone is passed through freshly drawn blood, the red corpuscles lose their colour, and in the process are destroyed. M. Schönbein adduces as an additional proof the circumstance that such decolorised blood is no longer capable of producing the characteristic blue colour with the tincture of guaiacum.

Ozone passed through putrid blood destroys the putrescent odour and restores coagulation.

The long-continued action of ozone on *albumen* gives rise to the appearance of "flocculi" resembling fibrine, and Mr. Smee, junior, believes these "flocculi" to be fibrine; but as they are not soluble in nitric acid this opinion must not be hastily accepted. M. Gorup-Besanez considers that the change undergone by albumen when treated with ozone is in many respects similar to that caused by pepsine.

Upon urea, ozone produces no oxidising effect.

Upon uric acid, ozone acts rapidly, causing it to become soluble in water, which water, upon slow evaporation, yields yellow prismatic crystals; and by further evaporating the water from which these crystals are obtained, urea is obtainable.

Allantoin, *alloxan*, and *creatine* are not affected by ozone; and *leucin* is acted upon but little, if at all.

Ozone produces creatine from creatinin, and converts the solution from an alkaline into an acid one.

Ozone converts *casein*, at one stage of the experiment, into a substance very like albumen; but a more continued action of the ozone causes the formation of flocculi in every way resembling those produced by the action of ozone on albumen.

Milk, through which a stream of ozone has been passed for some time, will, if kept for a few days, lose all its casein, whilst the fatty particles of the milk will remain in an unaltered state for a very lengthened period.

If ozone be passed through *bile* containing all its natural constituents, it is very soon decolorised; but if the bile be freed from colouring matter, mucus, and fat, no effect is produced on it.

Conclusion.—1st. The history of ozone, through all the steps that have led to its discovery, is singularly interesting and beautiful. The discovery throughout has been conducted purely on the constructive or synthetic method; and, in all its early stages, has been the result of simple observation apart

from theory. Progress in regard to it has thus been made by long but even steps, each independent observation being confirmatory of what has passed before, and tending ultimately to the same end.

2nd. There can be no escaping at this moment from the theory that ozone is a modified condition of oxygen—indeed, is oxygen plus force, which force is probably used in condensation; in other words, the power or capability of oxygen to combine with itself.

3rd. The artificial production of ozone, and the quantity that can be so produced, or, perhaps it is preferable to say, the quantity of oxygen that can be transformed into ozone, is most clearly and distinctly defined—in fact, in the laboratory, the production of ozone is an absolute verity, as pure as the production of oxygen or chlorine. How ozone is engendered in the air—if it be there—is not yet in any way definitely understood.

4th. The ordinary tests for ozone are imperfect, not so much because they will not always prove the presence of ozone, but because they prove too much—that is to say, the presence of other bodies also common to the atmosphere.

5th. In its action on the body the effects of ozone seem to be confined to the respiratory passages and structures; indeed, it is purely local in its action, closely resembling diluted chlorine and diluted bromine in vapour. The symptoms induced, varying in intensity, may be catarrhal, bronchial, or pneumonic; nor is there any evidence of any other class of diseases from ozone.

6th. Ozone administered so as to produce death promotes conditions clearly indicative, as I have already stated, of local action confined to the pulmonary system; the conditions are those of suppressed secretion, vascular congestion, and exudation.

7th. The relation of ozone to disease—if there be such a relationship—is confined to disease local in its character, and to one part of the system, the respiratory. Beyond this there is no logical argument whatever; and even this must be accepted as problematical until other potent influences are estimated as causes, on the principle of exclusion.

8th. On dead organic matter ozone exerts a powerfully destructive action, resembling, in this way, chlorine, iodine, and especially bromine.

9th. Ozone is a disinfectant and deodoriser, belonging to those bodies which disinfect and deodorise by resolving and decomposing into primitive and innocuous forms; competing, in this respect, with the substances already named—chlorine, bromine, and iodine. It possesses these qualities in a less degree than chlorine and bromine, and is in many cases not so applicable as iodine. * * *

10th. As a preventive of disease, ozone can only act by destroying organic animal poisons, in which respect it may again be compared with the substances I have more than once named.

Lastly, as a remedy. In the form of ozonised oil, of ozonised ether, and ozonised water, it once more ranks with a similar combination of remedies containing chlorine, bromine, and especially iodine. Whether, in any respect, it may prove to have greater advantages than the last-named trusty and ready agent, can only be conclusively arrived at by determining whether it will do what iodine will *not* do; and this can only be decisively made out by applying to it the touchstone of inductive philosophy—a rigid exclusion of all that is ineffective.

Note.—Under the head "Tests," in the portion of this paper which appeared last week, the following correction should be made:—Instead of "There are objections to the ozone box, which objections have been well pointed out by Mr. John Smyth, who thinks that," &c.,—it should read thus: There are objections to the ozone box, which objections have been well pointed out by Mr. John Smyth. This observer takes a view dissimilar to that of Lowe, who thinks that the velocity of air, &c.

Stafford, Jan. 1868.

DEATH OF M. LABORIE. — This well-known and highly-esteemed surgeon is another victim to the risks inherent in our profession. He had the charge of the establishment for convalescents at Vincennes, near Paris, and took erysipelas from one of his patients. This soon assumed the gangrenous type, and M. Laborie was carried off, having hardly reached his fifty-fifth year. A great concourse of friends and members of the profession accompanied his remains to the grave; and from the discourses delivered it may be gathered that the deceased is universally regretted.

EXPERIMENTS CONNECTED WITH SMALL-POX, INOCULATION, & VACCINATION.

BY JOHN SHORTT, M.D., F.L.S., M.R.C.P.L., &c.,
GENERAL SUPERINTENDENT OF VACCINATION, MADRAS PRESIDENCY.

(*Continued from p. 47.*)

Third Series of Cases. (*Ranecpett Parcherry.*)

Nov. 10th.—Moothoo, aged sixteen, male, caste Pariah. Said to have had fever on the 2nd Nov., and on the fourth morning the eruption made its appearance; few, not exceeding 200 to 300 in number, about the size of coriander seeds, firm, with central depressions, and having a flattened appearance, and of a pearl-like colour. When ruptured a clear, transparent fluid oozed out slowly; some sickening odour about the patient; free from fever at present. The fluid taken from several eruptions was inserted on the inner surface of the ears and scrotum of a black bull, aged two years, and another jenny (ass) was operated on with the same matter. The insertions in this latter instance were made on the outer side of each nostril by four punctures.

11th.—Insertions in the bull look angry; some indications of abdominal glands swelling.

12th.—Punctures forming; distinctly visible in a papular form, giving a gritty feel to the finger, whilst the centres of the papules are depressed.

13th.—Papules fully formed, with raised margins and central depressions at the insertions only. These were ruptured, and the contents transferred to two subjects this day.

No. 1.—Bejana Bee, aged ten, female; Mahomedan.
No. 2.—Beeban Bee, aged three, female; ditto.

No. 1.

Nov. 15th (third day).—All six insertions are promising.

16th (fourth day).—Three punctures on the right arm, elevated above the skin, and can be distinctly seen.

17th (fifth day).—Only two punctures of the left arm succeeded ultimately, and are now visible.

19th (seventh day).—Two very small vesicles in left arm.

20th (eighth day).—Third insertion in left arm shows indications of rising.

21st (ninth day).—Vesicles appear like ordinary vaccine. These were ruptured, and the matter transferred to two other subjects. Patient complains of pain in the eyes and extremities, and is somewhat feverish now.

22nd (tenth day).—The vesicles broken yesterday are crusting; those on the right arm more papular in appearance; has fever and headache; pains in arms and axillæ.

23rd (eleventh day).—Eruptions on left arm scabbing; right arm vesicular; these were broken, and a capillary tube charged with contents.

25th (thirteenth day).—Free from fever; a few small pimples are scattered over the wrists and trunk of this patient.

No. 2.

Nov. 16th (fourth day).—Insertions slightly elevated.

17th (fifth day).—Two in the right and one in the left arm are raised above the skin.

19th (seventh day).—At present there are only two vesicles promising and visible in the left arm.

20th (eighth day).—Of the insertions in the left arm, one is small and of a conical form, the other two are papular and do not promise well.

21st (ninth day).—Vesicles in the left arm promising; feverish.

23rd (eleventh day).—High fever; fidgety; hands tremulous; papules rising.

25th (thirteenth day).—The face, trunk, and extremities covered with from 200 to 300 small-pox eruptions.

Dec. 1st (nineteenth day).—Face and extremities are scabbing. Eruptions about the extremities pustular. These were ruptured, and the contents transferred to a cow-calf, aged eighteen months.

In all there were four small-pox subjects, from whom virus was transferred to the following animals:—

Cattle:* Two young bulls, three heifers, and one cow.
One pony. One dog.
Two donkeys. One goat.

* Vide tabular statement attached.

From these cattle there were five successive transfers of the virus to the human subject. The total of subjects successively operated on was forty-three. Of these, six comprised the original transfer from the cattle direct, one from a goat, and the remaining thirty-six were successive transfers from these subjects. Of the seven subjects originally operated on, one absconded, in two cases the insertions showed the true characters of vaccination, and in the remaining four, although the insertions progressed favourably, and in every respect resembled vaccination, small-pox eruptions showed themselves subsequently, and became scattered over their persons; the number of these pustules varying in the subjects from 30 to 200. Of these four subjects, the subsequent small-pox eruptions made their appearance in three on the twelfth and in one on the ninth day after the original insertion.

The insertions themselves ran their ordinary course, as is usual in cases of vaccination. In every one of these cases the insertions consisted of six punctures, three in each arm, and in the two subjects who had been free from secondary eruptions, two only in each case vivified, and in both these instances, on the seventh day after original operation, a fresh reinsertion was made in the failed punctures from the same small-pox virus passed through the cow.

Of the reinsertions in these cases, in the first case, only one vivified, a small papule showing itself on the ninth day from original, and third day after secondary, insertion. The papule formed a pustule on the eleventh day after first, and fifth day after second, operation; and the original insertions (the two that succeeded) had maturated, and were now forming scabs.

On the 21st of November (or sixteen days after original, and ten days after secondary, operation) the secondary pustule formed a small black spot, about the size of a large pin's head, whilst that of the original insertion, the scab of one had dropped off, while the other was still adherent.

On the 25th of November (or twenty days after original, and fourteen days after secondary, operation) the two remaining scabs dropped off, the former leaving behind a true vaccine cicatrix, and the latter a mere superficial minute scar on the arm.

In the second case the insertions were made on the seventh day after first operation, from genuine vaccine lymph; the two original insertions in this case had vivified, and were now visible in the form of good vesicles.

On the 15th of November (or ten days after original, and four after secondary, operation) the original insertions had maturated, and were scabbing, whilst the vaccine reinsertions had formed minute pimples containing a small quantity of pus. The patient had vomited, and was suffering from nausea, high fever, pain in the axillæ, and general *malaise*.

16th.—Original and secondary eruptions progressing; vomited twice since last report. General constitutional symptoms are abating.

17th.—All the pustules have scabbed over, while the vaccine scabs are very small; that from the small-pox virus resembles the usual vaccine scab in size.

20th.—Scabs drying.

25th (twenty days after original, and fourteen after secondary operation).—The scabs of all the insertions have come away, leaving good cicatrices on the original, and trifling scars on the secondary.

It will be seen in both cases that the test known as "Bryce's," which consisted in the reinsertion of virus as late as the seventh day, showed itself, and ran its course with the original operation, both in the case of small-pox and vaccine virus.

Lymph from these cases, charged in capillary tubes, and forwarded to Madras,* succeeded well, and there was no secondary eruptions; whereas in a third case, operated on at the same time and with the same virus as the above cases, on the 12th day after operation, some four or five papules were noticed on the face. On the 19th there were from eight to ten small conical vesicles, containing a little limpid fluid. On the 21st the whole surface of the body was scattered over with the eruption, of which there must have been at least 50 or 60 in number. The eruptions which first showed themselves dried without suppuration. A few vesicles on the hands and lower extremities have the characteristic appearance of small-pox—viz., the flat umbilicated look, and raised margin,—while some are hard to the feel, many acuminated, and others forming little bladder-like vesicles. The original insertions in the arm have increased in size, and are now scabbing. On the 28th, or twenty-three days after operation, the scabs from inoculated insertions have fallen away. The secondary eruptions have also scabbed, and a few dropped off, whilst other few passed through the regular pustular stage before scabbing.

In the second series of transfers, almost every case had secondary eruptions, varying in number from 30 to 300, these generally appearing about the twelfth day, and having the same character as that just detailed, whilst the insertions themselves progress satisfactorily, like ordinary cases of vaccination. It will be seen in the experiments that the bull operated on, on the 31st October showed indications of tumefactions of the skin, and enlargement of the glands generally; and out of five animals, this was the only one in which the disease took this irregular form. I am inclined to attribute it to the excitement the animal was under, the distance it had to travel over, crossing a river a mile wide, and having to swim over several portions of it. These circumstances, perhaps, may account for the irregularity. At the same time, the off fore fetlock had a greasy appearance, and was moist with exudation; and, irritated by flies, was covered with several bleeding points. This only showed itself with the tumefactions of the skin, and subsided with them. In the goat also, the insertion on the scrotum with small-pox virus showed a distinct umbilicated vesicle, resembling genuine vaccination, but it was surrounded to the extent of two inches with a greasy moist exudation, and peculiar musty odour. With this exception, nothing else was to be found wrong with the animal. In the cases where matter was transferred from the goat to the human subject, although the insertions ran the usual satisfactory progress, on the twelfth day secondary eruptions to the extent of nearly 300 showed themselves. The pony having been lost sight of, results were not observed. Of the two donkeys operated on, in one it failed altogether, and in the other the insertions only vivified and ran their course satisfactorily. In the dog also, the disease showed itself at the insertions only; and when transferred to a second animal, the insertions only vivified and followed their usual course.

Thus it will be seen that, in the lower animals, the insertion of small-pox virus takes on the ordinary character of vaccination, and is capable of being transferred either to other animals or to the human being.

It will be seen in Case No. 2, Manuel, that on the seventh day vaccine matter was inserted at the failed insertions, and it vivified and progressed in the manner described by Bryce, terminating with the originally-inserted virus; and, in another instance, in a subsequent series of transfers, when, on the fourth day, there were no indications of the small-pox virus having passed through the cow vivifying in the subject, reinsertion of genuine vaccine lymph caused the original insertions, as well as the secondary, to vivify and run their course satisfactorily.

It will be observed from the above series of cases that when the inoculated small-pox matter from the cow was sent to Madras, where there was no small-pox epidemic prevalent at the time, genuine vaccine disease showed itself; but when the same virus was transferred to others at Arcot, where small-pox had been for some time, and was then prevailing, vaccinia, or a modified form of small-pox, showed itself between the ninth and twelfth days after inoculation, and only two subjects inoculated from small-pox matter direct from the cow were free from vaccinia. In all the other original and subsequent transfers at Arcot, vaccinia followed; and in one instance, where four of the insertions of small-pox matter from the cow failed, reinsertions of genuine vaccine matter, as late as the seventh day after primary operation, caused the original small-pox insertions to vivify and run their regular course. This is an interesting feature in this case, as the secondary insertions only showed minute pimple-like formations, and the cicatrices were also equally satisfactory.

Further, the view originally propounded by Jenner, that cow-pox and grease in the horse were identical, is favoured by the fact of grease showing itself in the fetlock of the first bull operated on, and in the scrotum of the goat, and appears to me confirmatory of this view. However, further experiments are necessary to clear the point in a more satisfactory manner.

(To be concluded.)

* Vide Table attached.

ENERGETIC MEASURES BY LEARNED BODIES. — For some time past sulphate of *quassina* has been largely advertised in Naples, and used in several of the southern Italian provinces; but Prof. de Luca, having doubts about the article, analysed it, and found that there is no such thing as quassina, or alkaloid of quassia. He submitted his opinion to the Medico-Chirurgical Academy, who forthwith made application to the Council of Health to stop the sale of this deceptive substance.

A Mirror
OF THE PRACTICE OF
MEDICINE AND SURGERY
IN THE
HOSPITALS OF LONDON.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

WESTMINSTER HOSPITAL.

THREE CASES OF INJURY TO THE HEAD.

(Under the care of Mr. HOLTHOUSE.)

EACH of the three following cases presents features of interest. In the first, a certain amount of relief was obtained by the application of the trephine; but death ensued eventually from inflammation of the membranes of the brain. The second case was probably one of fracture of the skull through the petrous portion of the left and possibly of the right temporal bone, involving in a slight degree both facial nerves. This seems more likely than that both these nerves should have been damaged at their central origin, especially as no other cranial nerves were affected. The third case is interesting, not only on account of the original injury and the symptoms which arose from it, but from the man's condition three years afterwards. Contraction, it will be seen, had occurred in the formerly paralysed muscles.

CASE 1. *Compound comminuted fracture of the frontal bone, with depression and escape of brain-substance; application of the trephine, with relief; death on the eighth day from meningitis.*—George B——, carman, was admitted on the morning of the 12th of March, 1867, with a gaping, lacerated wound, two inches long, immediately above and parallel with the right eyebrow, produced by the kick of a horse. There was free arterial hæmorrhage, and on mopping the blood from the wound, portions of brain-substance were found adhering to the sponge. The bone was extensively bared and shattered, and one portion depressed and overlapped by another in such a way that no instrument could be got beneath it to raise it till a small piece of the overlapping bone had been removed by the trephine. The depressed piece was then found to be so completely isolated from all its connexions that it was removed, together with two other smaller fragments similarly circumstanced. Lint dipped in tepid water, with oil-silk outside, was then laid over the wound, and wet rags were applied to the forehead.

Condition an hour after admission.—Right upper lid much infiltrated with blood; both pupils dilated; pulse slow and feeble, 60; was conscious when roused, and answered questions abruptly; could partly extrude his tongue, and there was no paralysis. Just before the operation he vomited a large quantity of beer, and was so strong and resistant that chloroform had to be given before the trephine could be used. After the operation he was faint and much exhausted from his previous struggles. Pulse 120, very feeble. Pupils contracted. Strong beef-tea and milk diet.

March 13th.—He had quite rallied, and was rational when roused from the semi-comatose condition in which he lay. Wound not unhealthy; forehead hot; pulse frequent and feeble. Took his food well, and got out of bed to make water; no action of the bowels, and no more sickness.

15th.—Yesterday, five grains of calomel were given him, which brought away two copious greenish stools, and to-day he was decidedly better—i. e., less drowsy, perfectly conscious and sensible, and rather disposed to talk. He took his food well, called for the chamber when he wanted to relieve himself, but complained of headache and pain in his eye. Pulse 110, feeble. Wound looked healthy. Repeat calomel, three grains, to-night.

16th.—He passed a restless night, and wandered a good deal, but seemed better this morning; quiet and disposed to sleep, and perfectly intelligent when spoken to. Forehead not unnaturally hot; wound granulating healthily; eyelid still ecchymosed, but less swollen; pupils of normal size, and sensitive. Tongue dryish; bowels acted once in the night. Pulse 90, feeble, and intermittent three times a minute. Yesterday the house-surgeon reported it intermitted every fifteenth beat. He took his food well, and once asked for wine—his favourite beverage. Had coughed a good deal, especially when he was taking food.

17th.—Though quite rational when spoken to, he talked a good deal to himself, and confessed to feeling "very queer." The forehead was somewhat hot, and the feet cold. Pulse 110. He took his food less readily. Was restless up to two A.M., afterwards quiet. The bowels acted once during the night. Continue calomel, three grains; mustard plasters to feet.

18th.—He had a "fit" of screaming and convulsions last night, which lasted a full hour, and some spasmodic movements of the face this morning, and was now unconscious, and declined taking food. He passed his evacuations under him. Pulse very feeble.

19th.—He had a succession of convulsions throughout yesterday, affecting sometimes one side, sometimes the other (according to sister's account). When seen by Mr. Holthouse it was the left half of the body which was convulsed. He was now evidently sinking; respiration rapid and audible; pulse very frequent and feeble; sphincters relaxed. He died at 5.30 P.M.

Examination of the head twenty-one hours after death.—Blood was infiltrated into the deeper tissues of the scalp in the right frontal and parietal regions. On removing the calvaria, which was unusually thin, the dura mater was seen to be much congested, and the superior longitudinal sinus gorged with blood; a thin layer of the latter existed between the bone and dura mater in the frontal region, and also in the right middle fossa of the base of the skull. There were no traces of inflammation of the dura mater or of the arachnoid. No effusion into the cavity of the latter; but beneath it, between the sulci of the convolutions over both hemispheres, were yellow purulent or semi-purulent deposits, which became milky on approaching the base. On removing the brain, the part corresponding with the wound was of a rusty colour, and quite broken down. On making thin vertical sections of the anterior lobe, commencing through the lacerated and broken-down brain-substance, and proceeding backwards, extensive bruising was seen, with yellow discoloration of the white substance, which extended as far back as the posterior part of the middle lobe, with diminishing faintness till all traces of injury had disappeared. The fluid in the lateral ventricles was clear. No other injury or morbid condition was observable in the brain. The fracture of the skull involved nearly the whole breadth of the frontal portion of that bone, as well as the orbital, which were split transversely; so that after the removal of the calvaria, a piece, 3" long by 1" broad at its widest part, could be removed immediately below the sawn surface. The roof of the right orbit was smashed; but the fragments were held in position by its periosteal lining, and were not depressed. (There was but a very small ecchymosis beneath the conjunctiva of the eye, just over the insertion of the external rectus muscle, and none at the back of the globe.) The fracture of the right orbital plate extended inwards in a transverse direction across the body of the sphenoid and the roof of the left orbit, and outwards as far as the posterior part of the middle fossa. No subconjunctival ecchymosis existed on the left side.

CASE 2.—Frederick B——, aged nineteen, carpenter, was working under an arch on Jan. 25th, 1867, when it fell in, and a quantity of bricks striking him on the head, he was knocked down, and slightly stunned, in which condition he was brought to the hospital, copiously bleeding from both ears, chiefly the left, and slightly from the nose. His face was pale, and his feet cold; but hands warm, and circulation not greatly depressed. He was quite conscious, and answered questions put to him, complaining of pain in his head. There was no vomiting, or involuntary action of the bowels or bladder. Low diet, beef-tea, hot bottles to feet, and blankets over the body.

Jan. 26th.—Reaction was perfectly established; all bleeding from the ears had stopped. He complained of but little pain in the head. Pulse 72, of normal power. General condition favourable.

30th.—Continued to improve, and complained only of deafness.

Feb. 2nd.—Was up. The deafness, which affected chiefly the left ear, still continued, and there was evident indistinctness of speech. Left meatus and membrana tympani were so besmeared with blood that the condition of the latter could not be ascertained. Right meatus was covered with a fetid

sanious purulent discharge. Ears to be syringed with warm water.

7th.—After syringing and examining the ears in sunlight, blood was seen behind the left membrana tympani, pushing it slightly forwards into the auditory passage; but no rent or opening could be discovered in the membrane. The right membrana tympani was slightly nebulous and thickened, but no blood occupied the tympanic cavity. A fetid sanious pus besmeared the meatus. The ticking of a watch was heard by the right ear at a distance of three feet; but by the left only on contact. On analysing the defect of speech, it was found to be in an imperfect articulation of the labials: thus, he had a difficulty in pronouncing his own name, and all words beginning with B or P, M or Y. V and F he had less trouble with, and he remarked that the want of power was more in the upper than in the lower lip. He could not whistle or spit, and complained of the food getting between his cheek and his teeth on the left side. There was defective power in all the muscles supplied by the left facial nerve, and in a slighter degree also in those of the right: thus, he could not wrinkle his forehead, or frown, or close his eyelids, even on the right side, so strongly as he ought to do. There was no defect of deglutition, or of abduction of either eye, and none of sensation anywhere; but there was slight tinnitus in the left ear, and a little headache.

13th.—He was slowly recovering the power of the facial muscles, and spoke less indistinctly; but it seems he had always lisped a little.

19th.—He was discharged convalescent, with an injunction to report himself in two weeks, which, however, he failed to do.

It ought to have been mentioned that there was no distortion of the features, and no deviation of the point of the tongue, or of the uvula, when these parts were specially examined as to this deviation.

CASE 3.—Charles W——, aged thirty, carman, was admitted into the Westminster Hospital, January 7th, 1864, with a fracture of the basis cranii, from falling off a cart loaded with straw. He was unable to rise, and quite unconscious, and when brought in was pale and cold, and his pulse very feeble. He vomited several times, and his bowels acted freely and spontaneously. There was bleeding from his left ear, but no scalp wound or other apparent injury about the head.

Jan. 8th.—His skin was warm and moist. Pulse 80, soft. Was perfectly conscious and rational, and complained of no pain. There was no perceptible paralysis, but profuse serous discharge from the right ear, and slightly from the left. Low diet; beef-tea.

9th.—The serous discharge from the ear still continued, and there was slight facial paralysis of the left side, but he was able to close the eyelids.

11th.—Paralysis more marked; unable to close the eyelids of the left side; features much drawn to the right. Serous discharge continued, but not so abundant, and it evidently came from the left ear, and not from the right. The error of supposing it came from the right ear arose from his lying on his right side, and the pillow being saturated where his head lay; but it was now evident it came from the left, and ran down the back of his neck, wetting his shirt-collar, and afterwards the pillow. His bowels have acted twice freely from castor oil, and with relief. Mercury with colocynth pill, ten grains, to be taken at night.

12th.—Discharge still continued from the left ear, and the paralysis was the same; no constant cephalalgia, but occasional paroxysms of sharp pain. Though the sister said he was quite conscious when brought to the hospital, and asked for the night-chair as soon as admitted, he himself recollected nothing from the moment of the fall till he found himself in the hospital.

16th.—The serous fluid was standing in a puddle in the concha of his left ear as he lay on his right side. No material change in the symptoms, but expressed himself as feeling hungry, and asked for some meat and beer. Could close the lids feebly, and was quite deaf with the left ear.

23rd.—Had been up the last two or three days, and felt quite well and very hungry; asked to go out for exercise. The facial paralysis continued, and was observed to vary slightly from time to time, so that on one day he could close the lids, and on another could not do so; the features were considerably distorted, and the discharge from the ear, though less abundant, still continued.

30th.—He was discharged to-day at his own request, the discharge from the ear still continuing in small quantity, and being slightly fetid, the paralysis and deafness remaining the same; the general health, however, was good.

Jan. 22nd, 1867.—Has just been discharged from Mr. Brooke's care, under whom he has been for another fall on his head, less severe than the former, but followed by a slight bleeding from the left ear.

Since he was in the hospital, three years ago, he has had otorrhœa constantly, and the discharge is fetid; he hears nothing, he says, with that ear (watch not heard in contact).

The distortion of the features is gone, and he can close both lids equally well; but when he laughs, or puts in much action the facial muscles, those of the left or formerly paralysed side contract more than those of the other. He obstinately refused to allow the ear to be examined with a speculum.

MIDDLESEX HOSPITAL.

OUT-PATIENT CANCER DEPARTMENT.

(Under the care of Mr. NUNN.)

THE diagnosis in some forms of ulcer found on the lips and tongue and genitals is occasionally rendered somewhat difficult by an outward resemblance between the cancerous and the syphilitic ulceration and induration. The following cases have been selected as illustrating the above proposition:—

Solomon U——, aged fifty-two, December 20th, 1866. "Has an ulcerated gaping notch in the *upper* lip to the left of the median line. He has twice undergone excision: on the first occasion by a private practitioner; on the second, by one of the most distinguished hospital surgeons in London; and he attended during nine months at a cancer hospital. The ulceration has extended to the alveolar border of the upper jaw behind the sore on the lip; the ulceration of the bone, in fact, corresponds to the ulceration of the lip." This history of the case is syphilitic; the appearance of the sore is cancerous. Thirteen years previously the patient was bitten on the lip, at the part now affected, by a loose woman. The bite was followed by a sore, which remained open during three years; it then healed, continuing sound for five years, at the end of which period the sore broke out afresh, the patient alleges from the irritation of a pipe; it has remained unhealed ever since, having been twice operated on, as just stated.

The patient was put by Mr. Nunn on an antisyphilitic treatment, consisting chiefly of biniodide of mercury and iodide of potassium; the result being a considerable improvement in the appearance of the sore. The patient ceased to attend after a few weeks, but not before Mr. Nunn felt thoroughly convinced of the syphilitic nature of the ulceration. Mr. Nunn expresses his belief that the woman who inflicted the wound on the lip of the patient with her teeth, was suffering from constitutional syphilis; that a modified syphilitic sore was the result of the infection of the wound, and that, by subsequent modification of the poison in the patient's system and latency, a lupoid ulcer was developed of the same character as lupus, the consequence of hereditary syphilitic taint; although the relationship of lupus to hereditary syphilis is unhesitatingly denied by some writers. In the above case, the long history, and the situation of the sore on the *upper* lip, favour the view that the sore was not cancerous.

Charles S——, aged fifty-two, a smith, was sent to the hospital by Dr. Slight, of Brewer-street, Regent-street, for Mr. Nunn's opinion as to a sore on the *lower* lip to the right side of the median line.—Feb. 21st, 1867: "The sore is about the size of a threepenny-piece, and has hardened edges; a gland below the jaw is enlarged; the patient is quite free from any kind of sore on his genital organs. The sore has existed during *one week*." The probability of every source of contagion was examined. It appeared that the patient was in the custom of taking up from the work-bench any tobacco-pipe that might come to hand. The straightforwardness and candour of the man, in his replies to searching questions, left little doubt of a tobacco-pipe being the medium of his infection with syphilitic poison. The *short* history of the sore in this case eliminated the question of cancer in calculating its origin. In the course of a few weeks constitutional syphilis declared itself; and a note of the case, May 9th, states that an attack of iritis was subsiding at that date.

— M——, admitted Jan. 25th, 1866, with sore on the *lower* lip to the right of the median line. The sore had an indurated base about the same size as that in the case above recorded. There was an enlarged gland below the jaw. The patient stated that his mistress had sores on the inside of the mouth. This patient suffered shortly afterwards from constitutional syphilis. He applied to the cancer department of the hospital, under the fear that he had cancer of the lip.

Robert D——, aged seventy, admitted June 20th, 1867. "Situated just at the junction of the scrotum with the penis on the raphé is a circular sore, having a diameter of half an inch. The posterior segment of the margin is raised and rounded, very closely resembling the edge of an epithelioma-tous ulcer; but the anterior segment is not raised, and is, moreover, obviously inclined to cicatrise. Enlarged glands are to be felt on either side in the groin." The possibility of venereal infection was stoutly denied. The patient stated that the sore commenced six months previously by a small pimple; that this had been "burnt" several times at an hospital, where he was told the disease under which he was labouring was cancer. Be that as it may, when he applied to Mr. Nunn the sore was covered with red precipitate ointment. Mr. Nunn decided, from the cicatrisation of the anterior segment, to treat the case as one of syphilis. Accordingly, bin-iodide of mercury was prescribed; and on July 11th—that is, at the end of three weeks—the sore was quite healed.

The two following cases of syphilitic ulceration of the tongue had been treated, Mr. Nunn was informed, at a special hospital for cancer during many months:—

George L——, aged thirty-six, admitted Aug. 4th, 1864. The patient applied at a general hospital in January preceding. He was directed to apply at the Cancer Hospital. He did so, and was there treated during seven months as a cancer patient. Mr. Nunn prescribed iodide of potassium, &c. The sores on the tongue were very painful and very obstinate, resisting a variety of local treatment; but it so happened that the patient was attacked smartly by erysipelas of the face in May, 1865, and from the date of recovery from that attack the tongue became manageable and healed.

John B——, admitted Jan. 12th, 1865. "Has deep syphilitic fissures along both edges of the tongue." He states that he had attended at the Cancer Hospital during eighteen months, all the time believing himself to be the subject of cancer.

This case has proved remarkably obstinate; and, up to the present date, the patient comes occasionally. In December, 1865, iodoform, in one-grain doses thrice daily, was apparently of considerable service. Ultimately its therapeutic influence was doubtful. A mixture of chlorate of potash, with iodide of potassium and sesquicarbonate of ammonia, has proved on the whole to be the most effective remedy.

LOCK HOSPITAL.

STATISTICS OF THE FEMALE OUT-PATIENTS FROM JULY 2 TO DEC. 31, 1867.

(Under the care of Mr. BERKELEY HILL.)

CASES of syphilis, 207; ulcers of the vulva and vagina, 54; ulcers of the os uteri without syphilis, 31; vaginal discharge only, 64; anomalous cases, scabies, eczema, &c., 44: total number of women, 400.

In 104 of the 207 cases of syphilis the duration of the disease was ascertained:—In 41 it was under one year; in 63 it exceeded one year. In 49 it exceeded two years; in 31, three years; in 23, four years; in 19, five years; in 13, six years; in 12, seven years; in 9, eight years; in 8, nine years; in 6, ten years; in 3, eleven years; and in 1 it had lasted twenty-six years.

In October, November, and December, of the daily attendance, 30 per cent., as nearly as could be ascertained, were married women who had been infected by their husbands. These women, more anxious to get well, attend more regularly than prostitutes.

Provincial Hospital Reports.

SHEFFIELD PUBLIC HOSPITAL.

COMPOUND COMMINUTED FRACTURE OF FIBULA; WOUND OF PERONEAL VESSELS; AMPUTATION AT KNEE-JOINT; DEATH FROM SECONDARY HÆMORRHAGE.

(Under the care of Mr. JACKSON.)

MR. H. BRIETZCKE, house-surgeon, has obliged us with the following notes.

W. R——, aged forty, admitted Jan. 5th, 1867. While at work his right leg was jammed between two heavy grind-stones. He walked a few yards, and was then brought to the hospital in a cab.

On examination, a wound about three quarters of an inch long was discovered over the fibula, two inches and a half above the malleolus, parallel with the bone. There was considerable hæmorrhage of a venous character, but this soon stopped. A probe was passed inwards deeply for about two inches, and a comminuted fracture of the fibula made out, but the fragments were not much displaced, and did not project through the wound. There was much swelling and tension at the part injured, extending to the foot; and much pain was experienced when the limb was handled. The anterior tibial artery could not be felt. The patient was placed in bed, the leg raised on pillows, and water dressing applied.—9 P.M.: Lint soaked with blood; swelling increasing; great pain. To have half a drachm of sedative solution of opium in water immediately.

Jan. 6th.—Water dressing applied; tongue furred; no appetite.—4 P.M.: Swelling much increased; great tension; skin dark-coloured and inflamed; wound looks bad. Superficial incisions were made, with some relief to pain. Poultice ordered.

7th.—Swelling and inflammation increased, extending nearly to the knee-joint; great restlessness; delirium at night. A purgative draught ordered, and carbonate of ammonia with bark; beef-tea, and six ounces of port-wine.

8th.—The leg looks dark-coloured and brawny; blebs have formed around the ankle, and the foot is œdematous.

9th.—Back splint applied; limb lightly fixed and swung. Poultices from knee to ankle. A solution of nitrate of silver (twenty grains to the ounce) applied around the upper third of the thigh. Omit wine.

10th.—Delirium at night; pulse 120; tongue foul; skin hot. To have an ounce saline draught every fourth hour. Five or six deep incisions were made through the brawny cellular tissue, and a considerable quantity of blood escaped, which did not entirely cease until the next day.

11th.—1 P.M.: Wound oozing a little; pulse 130; countenance depressed; wound sloughing.—At 9 P.M. Mr. Jackson saw him, and decided upon amputation, which was performed through the knee-joint. On dissecting the leg after removal, a comminuted fracture of the fibula was discovered, it being broken into five pieces. Close to these fragments the peroneal artery and vein passed, and some extravasation of blood was found at this part. The cellular tissue of the limb was brawny, and infiltrated with blood. The anterior and posterior tibial arteries were uninjured. The ankle-joint was full of pus, but the fracture did not communicate with it.—After the operation the patient was ordered an opiate, half an ounce of brandy every fourth hour, and beef-tea.

12th.—9 A.M.: Slight delirium; no sleep; nausea; pulse 140.—11 P.M.: Pulse 146; no sleep. To have a grain of opium pill.

13th.—Pulse 126; pain severe at times.—9 P.M.: Bandages and dressings removed, some sutures divided, and a poultice applied.

14th.—Pulse 140; tongue brown; no pain; transient delirium; stump looks sloughy. Ordered, half a drachm of compound spirit of sulphuric ether, ten minims of aromatic spirit of ammonia, five minims of tincture of opium, in an ounce of water, every three hours.

16th.—Pulse 130; tongue foul; says he is better; skin cool; stump sloughing at one part. Ordered, twenty minims of tincture of sesquichloride of iron, and half a drachm of chloric ether, in an ounce of water, three times a day.—7 P.M.: Poultice reapplied.—10.45 P.M.: A change was noticed in his countenance by the nurse; she then discovered a pool of blood on the floor. On the arrival of the house-surgeon, a few moments only having elapsed, he was found in articulo mortis. The bed was deluged with blood. A tourniquet was immediately fixed upon the femoral artery, the flaps opened, and ice-water applied. The hæmorrhage then ceased, but the patient died in a few minutes.

An examination of the limb was made twenty-four hours after death. The ligature on the popliteal artery was firm, but there was no sign of a clot in the vessel. On the inner side of the posterior flap a quantity of clotted blood was discovered in the midst of the sloughing tissues, and, from the position of extravasation, it was supposed that one of the small arteries had given way and produced the sudden hæmorrhage.

CLINICAL SOCIETY, JAN. 24.—Order of communications: Ulcers of Cornea; Rheumatic Fever; Femoral Aneurism; Intermittent Hæmaturia; Renal Abscess; Fibrous Phthisis.

Reviews and Notices of Books.

Epidemic Meningitis, or Cerebro-spinal Meningitis. By ALFRED STILLÉ, M.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania; Physician to St. Joseph's Hospital, and to the Philadelphia Hospital. 8vo, pp. 178. Philadelphia: Lindsay and Blakiston. 1868.

EPIDEMIC cerebro-spinal meningitis had received little attention from English physicians until the recent outbreak of the disease in Ireland. It is a singular fact that none of the systematic English works on Medicine contain any account of this malady, although the disease has for upwards of a quarter of a century received prominent attention from continental and transatlantic writers. Even in the latest of our systematic works—to wit, that edited by Professor Russell Reynolds—the disease is not even mentioned in the section of "General Diseases" to which it appertains. It is to be hoped that this omission will be rectified in a subsequent volume; for it would be a matter of much regret if this important work should furnish another illustration of the inexplicable neglect of this malady by English physicians. The French, German, and American literature of the subject is good and abundant; and we are now indebted to an American physician for a systematic treatise on the disease of great value. It is true that epidemic cerebro-spinal meningitis has been frequently observed in France, Germany, and the United States, and hardly at all known in the British Isles until the late outbreak in Ireland. But it is not creditable that so fatal and formidable a malady should have received so little attention from our systematic writers. It is to this neglect that we must attribute the extraordinary confusion of opinion which prevailed among Irish physicians during the recent painful experience of the disease. True we possess a masterly memorandum on the malady by the medical officer of the Privy Council (Mr. J. Simon), and a valuable official report on the outbreak of 1864–65 on the Lower Vistula by Dr. J. Burdon-Sanderson; but these papers hardly save English physic from the charge of carelessness in this matter.

Dr. Stillé's work is peculiarly welcome. He has had considerable experience of the disease of which he treats, and, an accomplished physician and teacher, he records his experience and compares it with that of previous writers with great felicity. To the English reader, at a loss for a work of reference on the subject, Dr. Stillé's book will prove most valuable; and it is highly to be commended for its trustworthiness. One point especially deserves particular note at the outset. Dr. Stillé carefully compares the outbreak of 1866 in the United States with the earliest outbreaks recorded by American writers; and in this manner renders accessible much valuable information otherwise difficult of attainment in this country. And in connexion with this subject it may be noted that his book contains a copious bibliography, which is very acceptable for the references to American authors.

Dr. Stillé first discusses the history of the disease, and expresses certain novel opinions respecting its distribution. He remarks, first, that the disease is peculiarly entitled to the name "pandemic;" and he notes as characteristics of its prevalence (1) its simultaneous appearance in widely remote places, and (2) its annual recurrence for a series of years—characteristics not possessed by any other epidemic disease. He remarks:

"Its outbreaks have occurred almost simultaneously in regions as widely separated as Europe is from America; and annually it has made a midwinter attack upon towns and rural districts, the salubrious and unhealthy alike, completing the cycle of its progress in a period varying between ten and fifteen years. Three such periods, at least, have occurred during the present century. The first, of eleven years, began in 1805, and terminated in 1816; the second, of thirteen years, occurred between 1837 and 1850; and the third, extending from 1856 to the present time, has already lasted for eleven years, during which the disease has been almost constantly present in Europe, but absent during four years from the United States."—p. 12.

This summary is ingenious, but must not be received too absolutely.

After recapitulating the history of the disease, Dr. Stillé gives a general sketch of the symptoms, and then proceeds to discuss in detail the several symptoms. We shall not follow the author in his elaborate account, but we may remark that he has perhaps not given sufficient prominence to the fact that a state of *apparent* spasm is not unfrequently observed, depending upon the position assumed by the patients to relax exquisitely painful muscles, and which is liable to be mistaken for actual spasm. We may note also the mortality of the disease as it occurred in the epidemic hardly yet at an end in the United States. Dr. Stillé states that in Massachusetts the deaths were 61 per cent. of the cases (170 deaths in 278 cases), while in the Philadelphia Hospital the deaths were only 33 per cent. (43 deaths in 130 cases). He adds:—

"It is to be observed, moreover, that while ten epidemics in various places, occurring between 1838–48, presented an average mortality of 70 per cent., a similar number occurring during the decade from 1855 to 1865, gives an average mortality of about 30 per cent. This remarkable fact would seem to indicate a gradual decline of power of the epidemic cause."—p. 72.

We may add as a comment upon this conclusion, that the deaths from the disease in the Hardwicke Hospital, Dublin, during the recent outbreak, were 80 per cent. of the cases.

The variety of form observed during the progress of an epidemic is well illustrated by the classification adopted by Dr. Stillé; to wit:—*A.* The *abortive*, in which the characteristic phenomena are often faintly defined, yet to the practised eye distinctive. *B.* The *malignant*, in which the symptoms are exaggerated, the attack sudden, the course short, and the issue fatal. *C.* The *nervous*, including (*a*) the *ataxic*—namely, (1) the delirious, (2) the cephalalgic, (3) the neuralgic, (4) the convulsive, and (5) the paralytic; and (*b*) the *adynamic*—namely, (1) the comatose and (2) the typhoid. *D.* The *inflammatory*. *E.* The *intermittent*.

Dr. Stillé gives a careful account of the anatomical lesions of the disease, and of the circumstances under which it is developed. He adds nothing to our information on the former subject; and, concerning the latter, he fails to detect the mode of causation. He brings together the chief facts calculated to throw light upon this disputed subject, and leaves them to tell their own story. On the question of "contagion," however,—that is to say, communicability of the disease from the sick to the healthy,—he speaks positively, holding that the disease is not communicable. There are certain facts of apparent communicability which Dr. Stillé does not explain, and which justly leave some doubt upon the question. Hirsch, especially, states some circumstances which tend to an opposite conclusion, and at the least suggest caution for the present in our judgment.

Dr. Stillé treats at some length of the prognosis and diagnosis of the disease, and, touching upon its name, adopts the convenient term "epidemic meningitis." The Royal College of Physicians has recently adopted the name of "*cerebro-spinal fever*," and by this name the disease will doubtless henceforth be best known in this country.

Finally, Dr. Stillé considers the treatment. In the recent Philadelphia outbreak, cupping the nape of the neck (wet or dry) relieved the distressing cephalalgia. But the rule is against bleeding. Cold to the head and spine is a most valuable remedy in controlling head symptoms; and opium Dr. Stillé found to be of much service when the head symptoms were violent and there was much pain and sensitiveness of the surface.

"We were in the habit," he writes, "of giving one grain of

opium every hour in very severe, and every two hours in moderately severe, cases; and in no instance was produced either narcotism or even an approach to that condition. Under the influence of the medicine the frame grew warmer and the pulse fuller, and the entire condition of the patient more hopeful. It seemed probable, however, that the full benefit of the opium treatment could be received by those only who were subjected to it in the early stages of the attack. Direct experience is here in perfect accord with the expectation which a knowledge of the pathological processes involved in the disease would naturally suggest."—p. 158.

Add to these suggestions the preservation of the warmth of the surface and a nutritious diet from the outset, and we have summed up the positive indications of treatment taught by experience. Dr. Stillé discusses the reputed and probable action of many drugs in the malady, and the practitioner will do well to consult his work regarding their utility.

Analytical Records.

LIQUOR MAGNESIÆ CARBONATIS (BRIT. PHAR., 1867).

Among the valuable preparations which were made officinal for the first time by their introduction into the British Pharmacopœia of 1867, fluid magnesia occupies a prominent position. It has been manufactured for many years by the firm of Dinneford and Co., of New Bond-street; and from time to time during the last quarter of a century a large number of medical and other scientific men have borne testimony to the uniform strength and purity of their preparation, and it would appear as if the Pharmacopœia process had been devised with a view to the production of a similar solution. Fluid magnesia, however, cannot be made without a special and rather costly apparatus; and the manufacture is, therefore, likely to continue in a few hands. We have had an opportunity of inspecting every part of Messrs. Dinneford's factory, and have been much pleased with the completeness and excellence of the arrangements. Pure distilled water—for the production of which there is ample provision—is used as the menstruum in which carbonate of magnesia is dissolved through the agency of carbonic-acid gas, produced and purified with non-metallic apparatus. The resulting solution—the strength of which is always tested by a member of the firm before it goes into stock—is free from those contaminations which would inevitably be present if common water or imperfectly-purified gas were employed. We have carefully examined some of the solution supplied by Messrs. Dinneford, and represented to be of the "strength of the British Pharmacopœia, 1867," and we find that it answers in every respect to the characters and tests indicated in the Pharmacopœia.

THE WEST INDIA LIME-JUICE AND LIME-JUICE CORDIAL OF MESSRS. L. ROSE AND CO., OF LEITH.

There are few articles more liable to sophistication than lime- and lemon-juice; and there are but few, also, the consequences of the adulteration of which are more serious. So strongly has this at last been felt to be the case, that the Government has been constrained recently to legislate with a view to secure the purity of these articles. The adulterating ingredients usually employed consist of tartaric acid, bitartrate of potash, common salt, and even sulphuric acid; but not unfrequently the fluid called lime- or lemon-juice consists of little more than a solution of citric acid in water—the salts of potash, which play so important a part in the remedial and curative action of lemon-juice, being in this case entirely absent.

By the Merchant Shipping Act, the addition of 15 per cent. of proof spirit to lime- and lemon-juice is allowed, for the purpose of preventing fermentation, and thus ensuring its preservation. This addition is however costly, if it be not in other respects objectionable; and we have recently received some samples from Messrs. Rose and Co. which, it is affirmed, will keep well for a long period, and which, as we have ascertained by analysis, are perfectly free from spirit.

The sample of Lime-juice forwarded by the firm above alluded to has a specific gravity of 1026·95, and furnishes 4·03 per cent. of crystallised citric acid, 5·06 per cent. of grape sugar, 2·30 per cent. of albuminous matter, 6·16 per cent. of total extractive matter, iron, and the usual potash and other salts. The ash per 1000 grains weighed 2·93.

A sample of the Lime-juice Cordial of Messrs. Rose and Co. had a specific gravity of 1126·40, yielded 2·88 per cent. of crystallised citric acid, 7·95 per cent. of grape sugar, 13·62 per cent. of cane sugar, and 31·0 grains of extractive matters, as well as the usual saline constituents. The ash weighed 2·40 per 1000 grains of cordial.

As the result of our examination and analysis, we found the samples we operated upon free from spirit, in a good state of preservation, and genuine.

PRICE'S SOLIDIFIED GLYCERINE OR GLYCERINE SOAP.

The value of glycerine as a remedy for various skin affections is now generally known and admitted; it was therefore both natural and desirable that it should be presented to us in the solidified and therefore most convenient form of a soap. So numerous are the uses and purposes to which glycerine may be applied, especially in combination with other remedial substances, that glycerine compounds abound. Unfortunately, many of these so-called mixtures of glycerine are so in little more than name; they are either destitute of that substance, contain it only in minute quantities, or, when even present in larger amount, the quality is often by no means good. This observation applies with more or less force to many of the so-called glycerine soaps, perfumes, and cosmetics. In Price's solidified glycerine, however, we possess an article of really definite composition and of superior quality, and one on which we believe that the profession and the public may fully rely. It is stated of this glycerine compound that it wears well, gives a rich lather, and that it contains over half its weight of Price's distilled glycerine, the accuracy of which statement we verified by the following per-centage analysis:—

Water	21·5
Fatty acids	29·5
Soda	3·7
Glycerine	45·3
	100·0

ON LITHOTOMY BY A SEMILUNAR EXTERNAL INCISION.

To the Editor of THE LANCET.

SIR,—I venture to think that the following facts, very briefly related, will form a not unimportant contribution to the subject discussed in the interesting communications of Sir Wm. Fergusson and Mr. Erichsen.

Sir Wm. Fergusson has adopted in four cases of lithotomy the external incision of Dupuytren's bilateral operation, combined with the internal incision of the ordinary lateral operation.

Mr. Erichsen has adopted in one case the original operation of Dupuytren—that is, the external semilunar incision, with an internal one, similar in form and direction, made with the "lithotome caché," in both lobes of the prostate.

Now the most important point, it must be conceded, is the *internal* incision; that the external one, wherever it is, should be free, is agreed on all hands. Mr. Erichsen argues in favour of the division of both prostatic lobes, in order to obtain room for a large stone.

That incision I have now practised for several years, on these very grounds—viz., that the internal opening in median lithotomy is insufficient for any stone above a moderate size (and such are almost always crushed), and that the internal opening in lateral lithotomy is less safe than that made by the lithotome caché. The first time I used the lithotome caché for the bilateral incision of the prostate was November 19th, 1861, making the external incision in the median line. Mr. Erichsen kindly held the staff for me on that occasion.

During the last three years I have operated, *in the same manner*, on ten more adults, in all eleven cases, and of the respective ages of 43, 71, 73, 68, 80, 69, 55, 78, 45, 63, and 67 years. The three largest calculi so removed weighed respectively 3½ oz., 2¾ oz., and 2¼ oz. The first and second of these three cases are still living, and were, like several of the others, cut in University College Hospital. It is true that any experience of eleven adults reckons for little in an estimate of mortality; still, it is the largest at present existing in this country, and the results with it, the ages considered, are satisfactory.

I am, Sir, your obedient servant,

Wimpole-street, Jan. 1868. HENRY THOMPSON.

THE LANCET.

LONDON: SATURDAY, JANUARY 25, 1868.

IT will be in the recollection of the public that Lord DEVON announced in the House of Lords, during the autumn session, that a selected number of the country workhouses in each Poor-law district of England and Wales had been specially inspected by Dr. EDWARD SMITH, in order that the Poor-law Board might obtain a skilled opinion as to the average sanitary condition and general management of the provincial workhouses. Dr. SMITH'S reports were ordered by the Lords to be printed, and, after a very tedious delay, they are at length published. A more important set of documents have rarely been published for the information of Parliament; for although to the eyes of persons who are not familiar with workhouse arrangements, there may not appear to be anything very striking in these reports, which are written in a studiously dry and measured tone, and which abstain entirely from comment on many of the most serious facts which they relate, yet, to anyone who knows enough of the subject to realise the meaning of certain statements, they are full of significance. We will not say that it would be impossible to write anything which should more utterly condemn the existing workhouses. But we question whether anything, except the Farnham inquiry, has given such decisive proofs of the rottenness of the whole system on which they are built, organised, and managed.

It will be impossible for us to analyse the whole of the mass of papers in one article; we therefore propose at present to deal with the general conclusions of Dr. SMITH, as expressed in his opening report; reserving to a future occasion the consideration of the reports in individual houses, and the large amount of information as to the habits and ways of those curious creatures called "Poor-law inspectors" which incidentally crops up in the pages of this Blue Book.

We must remark, in the first place, that Dr. SMITH'S general report labours under one serious defect. Undoubtedly it should have contained, and indeed mainly consisted of, an analysis of the facts observed in the workhouses actually inspected; instead of which it deals for the most part in generalities, only rarely making reference to particular examples. This is much to be regretted; for the non-medical public will never be able, without help, to obtain an accurate idea of the state of things which the special reports indicate. In fact, so striking is the absence of direct comment on the very serious matters which are revealed by the detailed reports, particularly with regard to the way in which official inspection has been habitually performed, that we must suppose Dr. SMITH'S reticence to be conscious and intentional. We presume that he was unable to bring himself to speak of the conduct of his colleagues in the language which it merited, and therefore preferred to let the facts speak for themselves.

The substance of Dr. SMITH'S suggestions as to the deficiencies of existing provincial workhouses is as follows. He finds that classification is never completely carried out. The great bulk of the workhouse populations is always composed of helpless persons, as is the case in London, but it is only in towns that any considerable number of these are severely ill. The difficulty of distinguishing genuine sick cases from the chronic ailments of the infirm is urged as an extenuation to some extent of the existing defects of classification. We think that Dr. SMITH has made too much of this; and we shall also show, when we comment on his detailed reports, that we cannot entirely agree with his estimate of the number of inmates requiring special classification and treatment of a medical kind. Meanwhile, it is evident that Dr. SMITH is impressed much in the same way as our Commissioners with the confusion and disorderliness of the arrangements of the majority of the houses. In regard, more especially, to the offensive and dirty cases, he expresses a strong opinion as to the absence of proper arrangements for their separation from the other sick, and remarks that when a dirty patient is secluded, he is generally put in the worst instead of the best and most airy ward which can be used. On the other hand, the absurd mistake is not unfrequently made of putting fever wards at an immense distance from the other buildings, and thus rendering it difficult for the officers to visit them, so that they are left to the tender mercies of pauper attendants. On the subject of nursing, Dr. SMITH reports very unfavourably of the provincial workhouses. He balances the arguments for and against pauper nursing, but it is evident that he is convinced of the untrustworthiness of all but a very few pauper nurses; and he mentions with strong reprobation the fact that in some places where a paid nurse is employed she is obliged to do, not only the nursing, but the scrubbing of her wards. He mentions certain exceptional cases, however, and especially the notable instance of Liverpool, where large numbers of highly-trained nurses have been employed, and appears to have no doubt that the superior *morale* of such persons must have a favourable influence on the management of the sick. He notices with just reprobation the very general absence of night nurses.

As regards the construction of the wards, Dr. SMITH reports that there is every variety, from the very good to the very bad; but he does not give an opinion, as we think he ought to have done, as to the general average of excellence. He leaves us to form an opinion from the detailed reports, on which we shall have to comment on a future occasion; and, judging by them, we should say there was a minimum of good, and a maximum of bad, wards in the provincial workhouses. His very moderate proposals for a minimum of excellence in construction, which the Poor-law Board ought to sanction, speaks volumes as to the actual condition of things. And hints of the stolid and cruel stupidity which distinguishes the management of many workhouses in the country are to be gathered from the observation of such facts as this,—that the inmates of the house, whether sick, infirm, or able-bodied, are very generally excluded from the garden of the place.

It is in matters of more minute detail, indeed, that the true characters of country workhouses are exhibited. What Dr. SMITH has to say about the absence of decent washing apparatus for the sick—what he has to mention of bad ventilation, of the lack of nearly all those small articles which are really necessaries of personal cleanliness and comfort, in very many houses—will be better dealt with in our remarks on the reports of individual workhouses.

Upon one matter Dr. SMITH's report affords very strong evidence, and we are glad to see that his opinion is expressed decidedly. The salaries of the medical officers are, on the average, perfectly disgraceful, although that word is not used in the report. How it is that the guardians find it possible to secure the services of men who belong to a learned profession for paltry sums like twenty, thirty, and forty pounds (which appear to be not at all uncommon) passes our comprehension. It may surely be hoped that the mere exposure of the facts in public will ensure a speedy alteration in the present state of things. Either the promises of the President of the Poor-law Board mean less than nothing, or the Government has some desire, *inter alia*, to do justice to Poor-law medical officers. Here is a fine field, truly, upon which he may at once commence operations. There certainly can be little doubt that one clause of a new Poor-law Bill might be settled immediately; and it might run something like this: "And be it enacted further, that no medical officer of a workhouse infirmary shall be paid less than the current wages, for the time being, of agricultural labourers in the poorer districts."

THE highly suggestive and important address delivered at the last meeting of the Medical Teachers' Association by the President, Mr. SIMON, will be read with pleasure by all interested in the present welfare and future prosperity of the profession. Mr. SIMON's position is a somewhat exceptional one. Of the profession, as a teacher and hospital medical officer, he is yet not in it, in the sense of a competitor for private practice. He can therefore, as from a judicial eminence, survey the profession unswayed by those feelings of private interest which are such potent springs of action among his brethren, and take up the great questions of the present status and future prospects of both teachers and pupils in a calm and philosophic spirit.

From his intimate knowledge of medical and scientific matters in other countries, Mr. SIMON is able to draw a by no means flattering contrast between English and continental progress, and very rightly attributes our present condition in great measure to the supineness or wilful shortsightedness of our examining and governing bodies. Well may Mr. SIMON exclaim, "What might not the College of Surgeons have done in the last five-and-twenty years if it had worked disinterestedly!" Naturally selecting this, the corporation which issues annually the largest number of diplomas, and is at the same time the most obstinate and opposed to all reform, Mr. SIMON proceeded to show how a low standard of examination reacted upon the profession, producing practitioners of such an inferior character *quoad* science that the public services rejected those who were in possession of one or even three diplomas. Amidst some laughter, the President narrated the experiences of the Navy Board as reported in THE LANCET, and showed that members of the College of Surgeons were found to be ignorant of the only two subjects in which they were examined by that body and pronounced satisfactory.

The sentiment that the present regulations of examining bodies are utterly wrong, and that they afford no safeguard that the proper quantity and quality of knowledge shall be obtained, whilst they trammel students in obtaining it, found an echo in the speeches subsequently delivered at the meeting by London teachers of high standing. When we find men of reputation like Drs. HANDFIELD JONES, RUSSELL REYNOLDS, and ANSTIE declaring it impossible to carry out the present system in its integrity, and a general feeling that the present system of "schedules" is a gigantic sham, it is surely time that the teachers and the profession, and if necessary the Government, should put their shoulders to the wheel, and clear away some of the obstructions which at present block the path of the candidate for medical honours.

Obviously the system of "protection" which has been fostered for the last forty years by the examining bodies, and specially by the College of Surgeons, must be broken up. Those who will take the trouble to look through the earlier volumes of this journal will be able to appreciate the persistent efforts by which Sir ASTLEY COOPER and his successors contrived to extinguish all private teaching which did not suit the larger hospitals—in fact, "burked" all teachers who were not of "the elect." The voice of the then Editor of THE LANCET loudly denounced these attempts, which were but too successful, and the baneful results of which we are now witnessing; and it is a satisfaction to us to have to record in these same pages the eloquent denunciation of a system by which no great teacher is produced, no competition is excited, but all are reduced to a dead level of mediocrity worthy only of those who brought it about.

FAILING disaster, Lord RANELAGH is trying by quips to indoctrinate our volunteer force, and those who are most interested in its integrity, with the notion that a training to arms, however admirably carried out, is not all that is necessary for its efficiency. It would seem to be a peculiarity of the Anglo-Saxon mind, when influenced by a uniform and weapons of war, that it contemns all teaching except drill and sartorial fitness, unless under the impulsion of a catastrophe. Our regular army received its latest lesson in the Crimea, and it has learned that lesson somewhat imperfectly. Our volunteer army has had the opportunity, during the late civil war in the United States, of learning a lesson such as never before was unfolded for the profit of volunteer forces, and has neglected that lesson altogether. The Reports of the Federal Sanitary Commission show vividly the disastrous consequences which befell the Federal volunteers in the field at the outset of the war from the absence of an organisation, the want of which is also the reproach of our own volunteer army. To this defective organisation—which was fatal to the efficient co-operation of the different regiments in large bodies, to their proper feeding, clothing, and shelter, as well as to their proper care when sick—is attributed mainly the ineffectiveness of the earlier Federal campaigns, and an appalling death-roll. Indeed, throughout the war, the shortcomings of food and necessaries for sick and well among the volunteer forces told more fatally than wounds and death by shot and steel upon the strength of the army. From time to time, as various Reports of the Federal Sanitary Commission brought to light the defects from which the Federal volunteer forces suffered, we endeavoured to point out the bearing of these defects upon the training of our own volunteer army. We spoke to deaf ears. Let us hope that Lord RANELAGH will prove more successful in awaking attention to this important subject. He calls the volunteer army as it is now organised a "sham." Of this *The Times* has aptly said: "There are no brigades, no

divisions, no brigadiers, no divisional commanders. The various arms of the service—infantry, cavalry, artillery, and engineers—are all represented, no doubt; but of the subsidiary departments required for the efficiency of an army in the field, there is not a trace. The volunteers have no commissariat, no military train, no provision for their maintenance or movements [or, be it added, sickness]. They have no tents, no knapsacks, no greatcoats. They have not the means of keeping the field for twenty-four hours without distress. We have seen the outside of what can be expected of them at our great reviews. With three months' notice, and a corresponding amount of preparation, we can send 20,000 or 25,000 from London to Brighton, or Dover, for eight hours' service. Prolong the service to eight days, and what would be the result?" What, indeed! The result may be read in the early and disastrous, but we fear well-nigh forgotten, history of the Federal volunteers.

Medical Annotations.

"Ne quid nimis."

VACCINATION ACT, 1867: PUBLIC PROSECUTOR.

THE 28th section of the new Vaccination Act empowers boards of guardians to pay any officer appointed by them to prosecute persons charged with offences against the Act, and we hear that in Sheffield such an appointment has been made.

It appears that at a meeting of the Guardians of that union, held on the 15th inst., it was resolved that Mr. G. W. Earl "be appointed to take proceedings under the direction of the Board, against persons charged with offences under the Vaccination Act, 1867, such appointment to continue in force until the 15th of July next."

The chairman, in support of the resolution, is reported to have stated that the population in Sheffield in 1866 was 214,180, the deaths 6130, and that 2000 at least of these (i. e. about 33 per cent.) were due to preventable diseases. The births were given as amounting to 8865, and the vaccinations 4851, with probably an extra 1000 performed by private medical men. It was stated that the annual death-rate from small-pox during the last five years was 638.

We believe that the Sheffield Board is the first Board which has appointed a prosecuting officer under the new Act, and if the figures stated above are correct, it would appear that the appointment has not been made before it was wanted.

SANITARY MATTERS IN ABYSSINIA.

IF we are to judge by the accounts received from the special correspondent of the *Standard*, and published in that paper on the 20th inst., it would seem that there was after all very little good to be derived from the appointment of a sanitary officer to the Abyssinian invading army. Up to the date of the arrival of General Staveley, little or no attention had been paid to health.

A medical officer had been appointed as sanitary officer; but this appointment, it appears, might as well have never been made. It was not that this officer failed in his duty, or that there was no need for his services; on the contrary, the state of the watering arrangements was disgraceful, the native troops washing in the pools above those from which the drinking water was taken. The latrine arrangements connected with the 10th Native Infantry hospital were also simply scandalous. The pass was dotted with dead baggage animals in every stage of decomposition, and the stench from which was almost overpowering. The sanitary officer had pointed out these evils, and had applied for power to take on a few natives to burn the carcases in the pass. Nothing whatever was done. General Staveley, however, restored this officer to his proper place, and gave him authority to take on the natives and burn the dead animals, which were offensive enough to have created an epidemic among the advancing troops.

The absurdity of appointing a sanitary officer, unless his advice is to be followed, is obvious. We know pretty well what the habits of the natives of Abyssinia are, and we also know that cholera is by no means an unknown disease in the basin of the Red Sea; and this part of the coast was visited by an epidemic of it in 1865-66. If a sanitary officer is to be considered a necessary adjunct to an army, the present expedition appears to us to be one where his presence and advice are peculiarly needed. If the wells, the drinking-water, and streams once become tainted by foul and decomposing materials in such a climate as the Abyssinian lowlands, we may be quite sure that the telegrams will tell a different tale to the present; and we shall learn that the troops, as well as the mules and camels, are dying in large numbers.

ST. BARTHOLOMEW'S HOSPITAL.

A VACANCY for an Assistant-Physician has occurred at St. Bartholomew's, consequent upon the resignation of the post of Physician by Dr. Robert Martin, whose health, we regret to learn, is such that there is no probability of his being able to resume professional duty. Dr. Harris thus obtains his promotion, and Drs. S. J. Gee, Philip Hensley, and Dyce Duckworth are candidates for the vacancy. We have reason to believe that Dr. Gee is likely to be successful on the present occasion.

An important change has recently been made in the domestic arrangements of St. Bartholomew's by the abolition of the time-honoured office of Apothecary to the hospital, Mr. Frederic Wood, the respected incumbent, retiring upon a pension. For the future each of the four physicians of the hospital will have a house-physician, corresponding to the similar appointments on the surgical side, and a dispenser will be responsible for the "shop" department which was formerly under the apothecary's control. In this way, four new and valuable appointments will be open to the students of St. Bartholomew's, and, moreover, each physician will have a separate staff of assistants, with entire charge of the patients under their care—a system which has always worked well where it has been tried.

ROYAL SOUTH HANTS INFIRMARY.

MRS. EYRE CRABBE, a lady residing in the neighbourhood of Southampton, and who has for many years been prominent for her very liberal and generous aid to the infirmary, offered some three or four years ago to erect an additional wing to the building, as a memorial to her late husband, Colonel Crabbe, K.H., who was for eight years president of the institution. The completion of the work was the occasion of a meeting on the 16th ult. to celebrate the opening of the new wing.

The wing is placed with its long axis north and south, commands noble views of the surrounding country for miles, and contains on the basement several large, well-arranged, and well-ventilated offices and store-rooms, and also, in two stories, two wards. Each is 81 ft. long, 24 ft. broad, and 13 ft. high, containing 18 beds, thus giving about 100 square feet of floor, and 1400 cubic feet of air, to each patient. The windows are arranged exactly opposite each other, and run up close to the ceiling. Two beds are placed between each pair of windows, so that each bed has a window close to it on one side or the other; also under each bed is a ventilator communicating with the open air, and protected by fine wire gratings to prevent

sensible draught, and at the top of the ward are other Shermingham ventilators, both sets of ventilators being beyond the control of the patients. The ward is warmed by an open fireplace at the south end, and also by two Pierce's stoves, which supply a large volume of warmed air. On one of the coldest nights of last winter the lower ward was tested by Dr. Parkes, and though, from the severity of the cold, only a very moderate use was made of the ventilators, he found that the air was extremely pure; the outside air contained ·4035 per 1000 of carbonic acid, and the ward only ·588 per 1000, and "not the least smell of organic matter was perceptible the whole night, though the ward was frequently entered from the open air to test the point." The total amount of measured air, both hot and cold together, entering the ward, was 36333·1 cubic feet per hour; or the whole air of the ward was changed every forty minutes, and each patient (the ward was full) received 2018 cubic feet per hour. The patients never complained of draught. At the south end of the ward are two windows, enabling the patients to walk out on a covered balcony. The lavatory and watercloset arrangements are good. The lower ward has been opened about eighteen months, and the cases have progressed in an exceptionally favourable manner. Within a few weeks of its being used, several most severe cases happened to be admitted, and it may fairly be imputed to the sanitary state that they did wonderfully well. An old woman, with *bad* compound fracture, recovered without a single untoward symptom; in a case of very large fatty tumour, occupying nearly the whole back, the wound, after removal, healed by the first intention; a case of ovariotomy recovered without any drawback, and left in three weeks; a resection of the knee-joint, a lithotomy case, a case of hernia, and others, all got well without any bad symptom whatever. These cases happened to be admitted in the first few weeks, and their progress is probably as good a test of the ventilation, &c., as any that could be applied.

It should be mentioned that at the other end of the ward is a nurses' room, having a window looking into the ward. The cost of this valuable addition to the hospital, including furniture, has been £3600. The plans were provided by G. R. Critchlow, Esq., architect, of Southampton.

THE WELL AT THE STONEHOUSE MARINE BARRACKS.

A FRESH illustration, if any such were needed, of the extreme danger to health arising from the use of impure drinking-water has been recently afforded. About a fortnight since typhoid fever prevailed with great virulence in the newly erected wing of the Royal Marine Barracks at Stonehouse, and nine men of the division died from its effects. A medical court of inquiry came to the conclusion that the fever had been occasioned by the men in that part of the barracks being supplied from a certain pump. The water appeared to be very clear, cold, and sparkling, and had become so much in favour that it had been supplied to the officers' mess since the pump had been enclosed in the barrack yard. It was, however, found to be strongly impregnated with organic matter. A solution of this circumstance has since been disclosed. Stonehouse is built on a limestone rock, abounding with the usual caves and chasms generally existing in that stratum. On the introduction of the new system of drainage in the room of the old cesspits, the builders some thirty or forty years ago, having no regular system of drainage, carried many of their drains into those caves. It is believed that the well in the barracks is one of the reservoirs found in these caves, and that some of the contents of the drains has been regularly gravitating into it. On the other hand, the contractor employed for sinking the well expresses his confidence in the purity of the water at its source, and adds that he feels certain the water will be found to have become contaminated from the entrance of sewage matters from the surface, or from noxious substances having been thrown into it at the time the mouth of the well was exposed during some recent excavations and works. It matters little to the unfortunate sufferers how the sewage got in. Be the explanation what it may, we have much sickness and a certain number of deaths attributed to bad drinking-water as the cause.

FIRE AND LIFE.

WE are anxious to put in a word on behalf of the London firemen, who, we have reason to know, are being much overworked. The wear and tear of a life of such excitement as theirs would be excessive, even if a decent amount of rest were obtained. Everyone knows this, but it is not everyone who is aware that these men are often days, and even weeks, without getting a proper night's rest. It is not uncommon for men to be on duty for twenty-four hours or more at a stretch. This should not be. It is quite possible for protection from fire to be purchased at too high a rate, at the cost, indeed, of human life unnecessarily expended; and this is very much what is happening just now. A glance at Captain Shaw's report will show the cause. There are 43 fire stations now instead of the 17 which existed in 1865. The number of men, however, has not been proportionally increased. There were then 219, there are now 314. In Paris, if we mistake not, some 12,000 or 14,000 men are provided, to do far less work than is performed by a quarter of the number in our metropolis.

MILLINERS AND RECENT LEGISLATION.

THE health of milliners and dress-makers, such as it is, is a subject at once familiar and painful to medical men. It is rather a euphemism to speak of the health of milliners and dress-makers, for, in truth, it borders closely on disease. This class of persons come constantly to the medical practitioner with various symptoms and appearances which imply that their physical system has been subjected to every influence that could increase its sensitiveness and diminish its vigour, especially to most prolonged hours of work under conditions of imperfect ventilation and inadequate exercise in the open air. Paleness, neuroses, palpitation, weakness, are the common experiences of good milliners and dress-makers; for it would seem that the higher up we go in the trade the more frequent and the more exaggerated are those evils which beget the weakly condition we have described. At any rate, they occur in the maximum degree in London, at the West-end, and in the course of the London season, from March to July. During this period it is usual to work from eight in the morning to eleven at night; in the week preceding a drawing-room, Mr. Lord, one of the assistant-commissioners, says this is exceeded by two or three hours; and on the day and night immediately preceding the drawing-room, it is a common thing to work for twenty hours, and not unfrequently the whole night through.

Our readers are aware that these evils have been the subject of inquiry by a Commission—the Children's Employment Commission,—and the inquiry of the Commission has ended in legislation. It may shock some persons who vindicate the rights of women to find their employment regulated as that of children; but such is the drift of the Workshop Regulation Act. It is grievous to think that legislation should be necessary to remove evils which thoughtful humanity would not permit. But thoughtful humanity is rather a rare thing, even at the West-end, and we are reluctantly compelled to approve the following clauses of this Act, which provide, amongst other things, that no young person—i. e., between thirteen and eighteen—or woman (of the age of eighteen or upwards) is to work more than twelve hours in the twenty-four, the twelve to include intervals for meals; or after two o'clock on Saturday. The parties upon whose activity the efficiency of this Act turns are the "local authorities." There is to be no special inspection under

the Act. We fear this is a great defect. But the following clauses are signs of the times. They are qualified by some exceptions specified in the Act:—

"No child under the age of eight years shall be employed in any handicraft.

"2. No child shall be employed on any one day in any handicraft for a period of more than six and a half hours, and such employment shall take place between the hours of six in the morning and eight at night.

"3. No young person or woman shall be employed in any handicraft during any period of twenty-four hours for more than twelve hours, with intervening periods for taking meals and rest amounting in the whole to not less than one hour and a half, and such employment shall take place only between the hours of five in the morning and nine at night.

"4. No child, young person, or woman, shall be employed in any handicraft on Sunday, or after two o'clock on Saturday afternoon, except in cases where not more than five persons are employed in the same establishment, and where such employment consists in making articles to be sold by retail on the premises, or in repairing articles of a like nature to those sold by retail on the premises.

"5. No child under the age of eleven years shall be employed in grinding in the metal trades, or in fustian cutting."

The penalties which enforce these clauses are as follows:—

"7. If any child, young person, or woman is employed in contravention of this Act, the following consequences shall ensue:—First, the occupier of the workshop in which such child, young person, or woman is employed shall be liable to a penalty of not more than three pounds; second, the parent of or person deriving any direct benefit from the labour of or having the control over the child, young person, or woman, shall be liable to a penalty of not more than twenty shillings, unless it appears to the court before whom the complaint is heard that the offence has been committed without the consent, connivance, or wilful default of the parent or person so benefited, or having such control."

THE COBRA POISON.

WE are enabled to announce that his Highness Prince Rama Varma, the First Prince of Travancore, has supplemented the purse already offered for the discovery of an antidote to the cobra poison, by 250 rupees, making a total of 1750. In his letter to Dr. Shortt, the Prince remarks that no sum of money can be misspent in the furtherance of the cause of humanity; and if the trifle he offers can enhance the inducement for the disclosure of any existing secret, or further the prosecution of a well-directed inquiry in search of an effective remedy to however small a degree, he shall feel satisfied. He deeply sympathises with Dr. Shortt in his humane and earnest labour. We hope to make public at an early date a full account of the experiments that have been performed by Dr. Shortt up to the present time.

ST. GEORGE'S HOSPITAL.

WE commented last week upon a recent investigation at St. George's Hospital into some charges brought against that institution by a lady, which were proved to be both frivolous and groundless. We have the satisfaction of learning that another lady—one who was specially fitted to appreciate perfection in hospital economy—has recently paid this hospital a lengthened visit, and upon leaving it placed the munificent sum of £500 in the hands of the secretary, in token of her approval of all she had witnessed.

A VETERAN.

THE death of Titus Berry, Esq., F.R.C.S., at the age of eighty-eight, occurred on the 21st inst., at his residence, Chester-terrace, Regent's-park. Mr. Berry was formerly an army surgeon of some reputation, and enjoyed at one time a considerable practice amongst the higher classes. He was nearly the senior Fellow of the College of Surgeons, having become a member in March, 1801, the same year as Mr. John Bacot, who dates from December, but who is really the senior Fellow, having been elected in 1843; whilst Mr. Berry, together with Mr. John Carter, of the Indian army, Mr. Robert Hartle, of Trinidad, and Mr. Richard Spencer, of Fonthill-Gifford, whose memberships were in 1800, were only elected Fellows in 1844.

Mr. Berry was youngest brother of the late Admiral Sir Edward Berry, Bart.; and, being in Vienna at the time of the occurrence, was employed to convey to the British Government the news of Napoleon's escape from Elba. In order to accomplish this he travelled continuously for ten days and nights, hardly quitting his travelling carriage for a moment, and was rewarded by a present of £500.

THE CLIMATE OF SIERRA LEONE.

MEDICAL officers serving at Sierra Leone, West Africa, appear to have a very hard time of it, if we may judge from information which has reached us from that station. Within the last two months, we are told, nearly all the military officers have been attacked with fever. On the 21st of November Staff Assistant-surgeon Heather died of this disease. On the 15th of December Staff Surgeon Bradshaw, and on the 28th Staff Assistant-Surgeon M'Carthy, were invalided, to prevent their becoming speedy victims to the climate. There now remain but one medical officer in charge of the head-quarters of th 1st West India Regiment and a large garrison—Staff Assistant-Surgeon Dr. Gore,—on whom practically the whole work ha been thrown for the last two or three months.

Last year two medical officers died of climatic disease at Gambia, and in the face of this, and the fact of more than half the regimental officers being on sick leave, there is a rule compelling surgeons to serve three tours after promotion before they can be removed from the African list; and medical officers in this very insalubrious climate, we are informed, get no more pay than they would do if serving at home. The military and colonial officials are very well paid for the risk they run, but not so the medical officers. A commissariat officer, when doing the duty of his superior, draws his salary and allowances, also charge pay; but unfortunate medicos never come in for these little pickings. The one is always on duty; the other rarely more than an hour daily.

THE LATE EPIDEMIC IN THE MAURITIUS.

SOME very severe strictures are passed by the *Commercial Gazette* upon the Report of the Chief Medical Officer of Mauritius on the epidemic of fever which has prevailed recently in that island. It is asserted that the intention and object of the governor in nominating the General Board of Health as a commission of inquiry, to define the "causes of the disease, and the mode of treatment which has proved most successful"—have been altogether lost sight of, and are scarcely referred to; whilst such secondary matters as meteorological phenomena are described in abundance. Amongst the contents of the Report are recommendations for the *reboisement* of the island, that the peaks of all the mountains, their ridges, shoulders, slopes, and beds, should be planted with trees, in addition to the sides of public and cane-field roads, and the margins of rivers and streams; the canals to be covered over, and the water made to circulate through iron pipes and filters. Then extensive drainage is said to be suggested, also that two feet of earth should be put over the cemeteries, the sites of camps frequently changed, and special arrangement of privies adopted. Every block of twelve houses to be called a village, and to be under the surveillance of a sanitary officer in the form of head man. Villages to be belted round by trees, and the pollution of streams and rivers to be prevented by disallowing the building of future distilleries on improper sites. These and other matters are commented upon in a preliminary notice. The article concludes thus:—"The Report of the chief medical

officer on the recent epidemic for any useful purpose is not worth the paper it is written upon." We hope to have the opportunity of judging for ourselves of what is evidently an interesting document. Why, in this grave state of affairs, does not Government set a special commission to work at once to investigate the whole question of the origin of the epidemic in the island?

THE CLUB QUESTION.

THE Sick Club Committee of the British Medical Association, at a meeting which it held on Thursday evening, the 16th inst., passed the following resolution, which the profession will do well to carefully note:—

"This Committee, having considered the recent correspondence between the medical officers of the Cannon-street Male Adult Provident Institution, and the Committee of that Society, whereby it is shown that the Committee summarily dismissed their respectful application that the question of increased remuneration should be referred to the members, and that, in consequence thereof, Messrs. Oakes, Macpherson, Neal, and Ross Jordan declined to be put in nomination for another year at the old rate of remuneration,—Resolved, That in the opinion of this Committee no honourable member of the medical profession ought to become, or will become, a candidate for the offices vacated by those gentlemen, pending the discussion and arrangement of the whole question by the general body of members of the institution."

This resolution speaks for itself, and we cannot imagine that any one will disregard it. There must be no "split in the camp;" Ishmaelites must be reclaimed or abandoned, and every support should be given to Dr. Heslop and his coadjutors to bring about a satisfactory termination of the matter which they have in hand, really on behalf of the profession, for the Birmingham dispute has now lost its local character, and will have a wide influence. We are anxious to acknowledge the handsome manner in which the local journals, the *Birmingham Post* and *Gazette*, have espoused the cause of the medical officers.

MORTALITY IN EAST LONDON.

THE Registrar-General administers a crumb of comfort in reference to the distress now unhappily prevailing in the eastern districts of London. Allowing for any possible decrease of population, the death returns show that the mortality in those districts is not higher than it is in the rest of the metropolis. The deaths in East London last week were 321, or less by 7 than the average deaths of the ten corresponding weeks of the years 1858–67; and allowing for increase of population, the difference would be still more in favour of last week's return. The annual rates of mortality for the week were 27 per 1000 in East London, 27 in West London, 27 in North London, 26 in South London, and 29 in Central London. "It is gratifying," the Registrar-General adds, "to find that the distress has been hitherto so mitigated as not yet to produce either famine-fever or any other unusual disease."

AN OFFICER OF HEALTH FOR MANCHESTER.

THE Corporation of Manchester has determined to appoint an officer of health for the city of Manchester, at an annual salary of £500. The Corporation is desirous to receive applications from candidates, "medical or otherwise," on or before the 3rd day of February. Better late than never. If Manchester makes a good appointment we shall not reproach her for her remissness in this matter. We will only say that if other than the best *medical* candidate who presents himself be appointed, a great mistake will be committed. The health of a great city is surely worthy of technical and scientific consideration, and the large causes of disease are not to be understood or dealt with apart from that special knowledge which medical men alone have. This point is too obvious to be urged.

AN ANTISCORBUTIC "MENU."

AN *impromptu* exemplification of the resources that exist for the prevention of scurvy on board ship was afforded last week to several of the gentlemen connected with the Marine Department of the Board of Trade. Dr. Dickson gave them the opportunity of dining off preserved meats and vegetables which may be purchased of provision merchants, supplied to and used by any ship afloat, as supplementary to lime-juice. The bill of fare included soup and bouilli, essence of beef, Finnon haddock, fresh salmon, boiled beef (cold), boiled mutton (hot); preserved potatoes, onions, green peas, carrots, turnips, desiccated vegetables (mixed), pickles, red currants, cranberries, Normandy pippins, raisins, and prunes. As all the dishes were pronounced to be remarkably good, we hope the lesson will not be lost, and that the representatives of the official mind who were present will recognise, what we have long pressed upon the notice of the public, the possibility, by the exercise of a little liberality and common sense, of preventing much, if not all, of the scurvy which does so much damage to the *physique* of our seamen.

SMALL-POX AT WOOLWICH.

WE believe the accounts which have found their way into the papers as to the prevalence of this disease amongst the troops are much exaggerated, although it is undoubtedly true that there are several cases in the Woolwich garrison. We have been given to understand that small-pox has chiefly prevailed among the civil population and families of the dockyard labourers. At this season, and during such weather as we have had lately, there is usually a large amount of zymotic disease present at such places as Woolwich.

FAREWELL TO AN INDIAN SURGEON.

A VERY interesting ceremony took place on the 16th ultimo at Ahmedabad, Bombay Presidency, on the occasion of presenting a valedictory address to Dr. David Wyllie, civil surgeon, on his departure from that place to Abyssinia. The large hall of the Institute was crowded with members of every section of the community, and Dr. Wyllie was accompanied to the hall by a deputation consisting of the leading native gentlemen of the city. His reception was most enthusiastic. An address was read to him expressive of the great regard and esteem of the inhabitants of Ahmedabad for him in all his relations with them. The address was accompanied by a ring of great value. Dr. Wyllie, in an able speech, thanked his fellow-townsmen, and took his leave of them in a few touching and affectionate sentences. Previous to doing so, however, he made his hospital assistants very handsome presents.

PLYMOUTH NAVAL HOSPITAL.

WE regret to have to announce the sudden death on Wednesday last of Dr. Robert Beith, Deputy-Inspector of Naval Hospitals, who has had charge of the surgical wards of the Plymouth Naval Hospital since August, 1861. Dr. Beith had a severe fall from a ladder five days before his death, but was apparently uninjured, and on Tuesday last was able to enjoy a day's shooting and go out to a dinner-party. In the middle of dinner he was seized with some affection of the heart, and never rallied, dying early next morning. Dr. Beith was an exceedingly active and able medical officer, and had been advanced to inspectorial rank at an unusually early age. He was, as an assistant-surgeon, attached for many years to Greenwich Hospital; and was both a frequent attendant and contributor to the Pathological Society of London, then recently founded. During the Baltic campaigns of 1854–55 he served as surgeon on board the *Belleisle* hospital-ship, and was promoted in July, 1861.

This unexpected vacancy on the surgical side of the hospital may not impossibly have some effect upon the determination of the Admiralty respecting Dr. Stewart, R.N., since it will be scarcely judicious to have two new senior officers at the same moment.

HILL STATIONS IN INDIA.

THE works at Dalhousie, the newest hill station on the Himalayas above Lahore, are, we are told, progressing. The site of the barracks is at Balloon, 500 feet below the Dalhousie Mall, which has an altitude of 7000 feet. The new buildings, when completed, will accommodate 500 single and 64 married invalids. We hope to be able to congratulate Sir Ranald Martin one day on assuring him that a third of the whole European force is stationed on the hills, and that a third at least of the period of Indian service exacted from our European regiments is to be spent in a similar locality.

POLLUTION OF THE MERSEY.

THE Rivers Pollution Commission has opened an inquiry at St. George's Hall, Liverpool, touching the pollution of the Mersey, Irwell, and Ribble. Dr. Trench in the course of evidence adverted to the increased mortality of the borough of Liverpool from 1860 to 1866, which he attributed to the distress consequent on the cotton famine, and also to the advent of the typhus and cholera epidemics. He did not think that any portion of the sewerage system affected the health of the people; the most unhealthy part of the town was on a substratum of clay, and hence its unhealthiness. The borough engineer stated that twenty years ago the sewage was discharged into the docks and basins, but since that time the discharge has been directly into the river. Dr. Trench thought that Liverpool should be exempted from any general Act prohibiting the sending of liquid refuse from manufactories into the sewers, which would otherwise be equivalent to the banishment of all manufactories from the borough.

THE CORONERSHIP OF WEST MIDDLESEX.

THERE are still three medical candidates in the field, Dr. Hardwicke, Mr. Brown, and Dr. Diplock. It is, we believe, the intention of Mr. Brown to retire. If the medical interest be divided in West Middlesex, a lawyer will surely be returned. If, on the contrary, a single medical graduate goes to the poll his success is certain. Surely these facts are worthy of the consideration of those members of the profession who are at present in the field.

THE NEW INDIAN FURLOUGH REGULATIONS.

THE institution of new Indian Furlough Regulations is a step in the right direction. It is perfectly well known that leave from India under ordinary circumstances was attended with such pecuniary loss, that officers were obliged to forego the visit to this country necessary to the maintenance of their health. Officers, who have undergone that gradual deterioration of health induced by residence in India, have been compelled to obtain leave on medical certificate, or to feel themselves drifting into a diseased condition of a chronic nature. It is this, probably, which explains the statement in the *Times*:—"Of all the officers absent from India now, 83 per cent. have left on medical certificate, and only 16 per cent. on private affairs."

THE SANITARY CONDITION OF THE MADRAS PRESIDENCY.

So far as it has yet been determined the past year has, we understand, been healthier than its predecessors, within the Madras Presidency circle. While cholera, of a very virulent form, has caused a good deal of mortality among certain regiments in the Bengal Presidency, Madras has been comparatively exempt from it. This disease had broken out not long ago in the steam-ship *Burmah*, in a detachment of time-expired men from Calcutta. On the arrival of the vessel at Madras, steps were immediately taken to prevent any communication, by ordering the steamer to Ennore, a place about twelve miles from Madras, which was a convenient spot for landing troops, and a good site for encamping them. Only one fatal case occurred after this measure; the disease did not spread, and the men enjoyed perfect health.

Ennore is, as we have said, about twelve miles from Madras; it is salubrious, and would make, we are told, a capital marine sanitarium for our troops.

THE meeting of the Pathological Society was suddenly brought to a close half an hour before the usual time on Tuesday last. About a dozen Fellows failed from absence to respond to the call of the President. It not unfrequently happens now that gentlemen who write to the Secretaries requesting that their names may be entered as exhibitors of specimens do not put in any appearance at the proper time. This practice is clearly, except under very special circumstances, a breach of good manners; and the respect which is due to the Society should prompt Fellows to avoid such discourtesy in the future.

THE course of lectures on Anatomy at Cambridge will be continued on Tuesdays, Thursdays, and Saturdays, at 1 P.M., commencing on the 28th instant. The lectures are intended for students of natural history, those who are preparing for the B.A., and for medical students. Anatomical demonstrations will be given on Mondays, Wednesdays, and Fridays, at 6 P.M., and of Minute Anatomy every alternate Monday, at 7 P.M., commencing Feb. 3rd, and on Saturdays at 11 A.M.

THE annual meeting of the governors of the Torbay Infirmary and Dispensary was held on the 16th inst. The yearly report of the institution stated that an unusually large number of patients had been treated during the twelvemonth,—223 in- and 2380 out-patients; and no less than 7638 visits had been paid by the house-surgeon and his colleagues to patients at their own homes. This amount of work has been done without a hitch or a grumble of any kind, simply because the governors and the medical staff thoroughly understand each other, and have one common object in view,—the efficiency of their institution. The warm thanks of the governors were given to the medical officers, and attention was specially directed to the indefatigable exertions of Dr. Powell at one period of the year when fever prevailed to a large extent. The sum of twenty guineas was awarded him by the governors to mark their sense of the value of his labours.

THE return of the Livingstone Search Expedition brings with it the most reassuring intelligence hitherto come to hand of the daring traveller's probable safety. The expedition got within a few miles of the spot where Livingstone was said to have been murdered, and there ascertained that the Doctor had been taken on over a marshy lake, the Johanna men deserting for fear of falling into the hands of the Mavite. The story of the murder, it is now known, was invented in self-protection. This information is, therefore, most satisfactory.

THE Medical Officer of Health of Swansea reports that during the quarter ending December last the mortality of his district was remarkably low until the outbreak of an epidemic of measles in December, which carried off 15 people. The total deaths in the quarter were 42 less than the average of the five corresponding previous quarters. Vaccination is

reported to be much neglected. The drainage of the town is being rapidly extended; in some of the principal streets, which have been sewered for eight or nine years, the number of houses without waterclosset accommodation ranges from 20 to 100 per cent., and exceptions in favour of the more wealthy owners of houses are unfairly made, whilst the small-house-property men are compelled to carry out the connexion of their houses with the main drainage. The annual death-rate in 1867 for Swansea was 18·1 per 1000.

THERE will be no Hunterian Oration or dinner this year on the 14th February; but we understand that the President of the College, Mr. Hilton, purposes celebrating the occasion by a dinner at the Albion, to which he has invited the Council and other friends.

THE Council at their last meeting decided that the next general session of the St. Andrew's Medical Graduates' Association should be held on the 8th of April next in London. It is proposed that a discussion should take place on the question, What should be the legal definition of Insanity?

THE Terling epidemic, we regret to say, instead of showing any symptoms of abatement, still continues. We hear that since our notice last week there have been fresh cases of fever, and that the number of deaths has been increased.

AT the quarterly meeting of the Directors of the Naval Medical Compassionate Fund, held on the 14th instant, Sir E. Hilditch, Inspector-General, in the chair, the sum of £80 was distributed among the various claimants.

THE *Times* correspondence from Calcutta states that the Government of India has decreed the appointment of sanitary officers in every province. There will be now ten such officers in all, including the sanitary adviser of the Viceroy and Commander-in-Chief.

THE *Pall-Mall Gazette* states that the Marquis of Westminster has, within the past few days, given £2000 to the funds of the Denbighshire Infirmary, in addition to a previous donation of £500.

THE state of the public health in the colliery districts of the Tynemouth Union has been such as to induce Dr. Ward of Blyth to urge upon the local authorities the necessity of adopting active measures for preventing the propagation of disease, and for reducing the great mortality which for some time past has prevailed.

THE members of the Shepherd's Glee Lodge, Bedminster, have just presented their surgeon, Mr. J. N. Smart, with a handsome timepiece, as a "small token of their respect and esteem."

Dr. LAVIES, of Warwick-square, has been appointed by the Middlesex magistrates Surgeon to the Westminster House of Correction.

THE death of the widow of the late Mr. Bransby B. Cooper is announced, at the age of seventy-four.

ABYSSINIA IN ITS SANITARY AND MEDICAL ASPECTS.

WE have been enabled to gather some information from two Reports furnished by Staff Assistant-Surgeon Dr. Martin, who, it will be remembered, accompanied Colonel Merewether's reconnoitering party as special medical officer. The Reports are extremely good documents. Dr. Martin had previously supplied the Indian Government with the results of his personal observations and experience, gained during a residence, if we are rightly informed, in Abyssinia. The first Report is on Mulkuttoo, near Zoola, Annesley Bay; the second on Hadoda, a place on the Hadás.

We have not the space to enter into the topography and natural history of these places. The spot fixed upon as a suitable anchorage and landing-place for the invading force was Mulkuttoo, on the western shore of Annesley Bay, some four miles to the east of Zoola (the Adoulis of the Greeks). The reconnoitering party reached this on the 3rd October last. The country is described as an extensive level, alluvial plain, somewhat triangular in shape, the base being the sea-shore. The soil near the sea is quite sandy, with a slight admixture of mud at the landing-place. Owing to the great traffic between the latter and the camp there was much fine dust. The striking feature, as regards vegetation, was the great abundance of a description of brushwood—one of the *Halophytes*, or salt-plants—the *Salicornia*, which is replaced inland, at a distance of five or six miles from Mulkuttoo, by the stunted babool (acacia) tree.

There appeared to be two principal seasons, the hot and the cold; the former including April and five following months, the latter extending from October to March. The south-west monsoon reaches the highlands of Abyssinia, but not the coast-line, and here the rains occur during the cold season, principally in December, January, and February. The fall is not heavy, and occurs chiefly at night.

Dr. Martin describes the season as dry and hot. From eight A.M. to noon the heat is oppressive and close, with little or no wind. The sea breeze sets in at regular periods, generally about noon. The evenings and early mornings are pleasant, and the nights cool. The highest point of thermometer in the shade is 100°, the lowest 70°, extreme range 30°.

The water-supply was found to be quite insufficient, and Dr. Dr. Martin expresses his strong opinion about the necessity for steam-condensers. Tanks placed on shore were filled with condensed water from the ships, and it was urged that the supply ought to be on a grand scale, as abundance of good water is essential to health in so hot a climate, and the number of men and cattle in connexion with the commissariat departments would necessarily be large.

A specimen of Zoola water was analysed, with the result that it was considered potable, but that filtration was necessary to remove suspended impurities. The report contains an account of the small village of Zoola, with a description of its inhabitants. The medical history embraces the following points:—That there were very few old men, but that the village was at the time very healthy. Epidemics have not been frequent. Towards the end of 1865 and beginning of 1866, cholera raged there as elsewhere along the coast of the Red Sea, and carried off many victims. The last case was in May, 1866. Mild intermittent fevers prevailed in the rainy months; occasionally a severe case of nervous (remittent?) fever proved fatal. Small-pox is occasionally imported from the highlands; inoculation extensively practised. Dysentery mild in type, and rare; most common in summer. Consumption occasionally carries off a victim. Calculus vesicæ is unknown; venereal rare, and generally contracted at Massowah, where gonorrhœa is said to be very prevalent. The women are prolific, and the children healthy. Malarial fevers of a bad kind, according to M. Münzinger, the French and English Consul at Massowah, are very rare.

Dr. Martin did not think well of Mulkuttoo as an encampment, on account of its trying climate; and he urges, therefore, that the regiments should be pushed on to the highlands without delay. The necessity for supplying the troops with vegetables and lime-juice is dwelt upon, and this opinion is enforced by a reference to the evidence of some traces of scurvy among a few of the men of a native infantry regiment.

The second report is dated October 29th, and is on Hadoda,

or Udoda, the name given to a pass in the hills through which the Hadás torrent flows. Water being found here all through the year, it is a resort for numberless animals, and a resting-place for travellers. The highest point, as determined by an aneroid, was 900 feet above the sea-level, and 450 above the bed of the river Hadás. The climate is described as warm and dry; days hot, mornings and evenings cool, nights almost cold. The highest point reached by the thermometer, in the shade, during the fourteen days' stay was 99°, the lowest 61°; extreme range 38°. The mean daily temperature was 86°.

An abundant supply of excellent water was found to be obtainable here. The country is said to be thinly inhabited by a wretchedly poor nomad tribe, living in wigwams constructed of the boughs of trees.

The health of the party was excellent at this place. Dr. Martin entertained no fears about the generation of malaria; but the nature of the ground was objectionable in a military, though not in a medical point of view. We know from Dr. Blanc's account of the diseases of Abyssinia and their remedies, that syphilis is remarkably prevalent; and as this part of Dr. Blanc's report is very interesting, we append some portion of it, by which it will be seen that the views which we have always upheld in this journal on the uses of mercury and iodide of potassium in the several stages of this disease are corroborated:—

"I have vainly endeavoured to ascertain the date of the first appearance of syphilis in the country, and could arrive at no satisfactory data, but feel inclined to exculpate the Portuguese, as there is little doubt but that it existed previous to their advent. From the fact that the mercurial treatment of syphilis is unknown in Abyssinia, the various stages of the disease differ in some respects from what we observe in civilised lands. When the disease breaks out in its secondary form it affects, in preference, the mucous membrane of the mouth, anus, &c. The altitude of the Amba may possibly predispose the mucous membranes to resent the morbid infection; in the plains it may be otherwise. At Kourata I saw but few cases of syphilis, and those were of many years' standing, so that it is quite possible that skin diseases due to syphilis may exist, but at all events they must be exceedingly rare.

"Syphilis here affects the integument in a peculiar way. The skin of the scrotum presents small rounded puffy elevations—a kind of small empty abscess, soon followed by deep and quickly spreading ulcers very difficult to heal.

"The muscular, fibrous, and osseous textures are those on which syphilis principally spends its action. Syphilitic rheumatism is one of the commonest complaints; periostitis comes next; exostosis and caries are less usual, but still often met with.

"That mercury when administered in syphilis produces diseases of the bone, and that this form of tertiaries is due only to the action of that metal (as advanced by some), is contradicted by the observation of syphilis in this country, allowed to remain for years untreated and uncared for. On the other hand, the absence of the various forms of diseases of the skin may lead us to suspect that mercury has something to do in their manifestation. Another clinical fact is evinced by the study of syphilis in this country. If the affection is of recent date it disappears under the influence of mercury, but when it is of many years' standing, whatever may be the symptoms, and though no anterior mercurial treatment has been made, mercury not only does not prove beneficial, but often increases the evil. Iodide of potassium soon improves these cases, and a couple of months' administration of this medicine effects a certain and lasting cure."

SANITARY CONDITION OF MERTHYR TYDFIL.

IN his comments on Dr. Buchanan's invaluable Sanitary Report, Mr. Simon remarks that, all things considered, of few places is the progress more pleasing and hopeful than that of Merthyr Tydfil. "This place," he says, "used to be abominable. It had almost the unwholesomeness, with but a fraction of the apology, of Liverpool. In our statistics for 1851–61, it showed every possible evidence of sanitary neglect; in fever, in diarrhœa, in cholera, in small-pox, in phthisis, and other lung diseases, in mortality of children, test it how one would, it always was conspicuously bad; and when medical inspections were made there, every report told the same lamentable story of sanitary nonfeasance to the utmost." But, as a consequence of earnest sanitary work, these objectionable characteristics are disappearing, and we have now, in the second annual report of Mr. Thomas Dyke, the medical officer of health, relating to the health of the parish in 1866, another unquestionable instance of the power of preventive medicine.

Taking the years 1851–52 and 1866 as the points of comparison, pauperism has decreased 40 per cent., the general death-rate has fallen from 36 to 25 per 1000, the mortality of children under five years of age was reduced from 53 to 43 per cent., and the average age at death increased from 17¼ to 24¼ years. The saving of life under the lesser rate of mortality amounts to some 500 lives per annum out of a population of 54,000. But reviewing the sanitary topography of the district under his charge, Mr. Dyke shows that there is yet room for great improvement. Out of 9880 houses inspected in 1866, there were 5727 having privies with cesspools attached, and of these latter 793 were reported as being full to overflowing; 4153 houses were unprovided with conveniences; and 698 had no assured water supply. Furthermore, Mr. Dyke finds that in Merthyr 2¼ lives out of every 1000 of the population perished in the year 1866 more than would have died at the rate of mortality ruling in the same year in the county town of Cardiff, and this he attributes to the inferior sanitary state of the former. By comparison with the town death-rate of England, however, Merthyr now shows to a slight advantage, and there can be little doubt that the extent to which the removal of causes inimical to health has been carried is plainly written in the reduced mortality of this Welsh town. The establishment of the daily scavenging of refuse and ashes was followed by a diminution of typhoid fever; soon after an abundant supply of water had been provided, the mortality from measles and scarlatina was reduced; and the thorough drainage of the subsoil, and the removal of sewage, will still further reduce not only the death-rate, but the amount of sickness also.

The mortality by epidemic contagious diseases varied in the different parts of the parish from 1 in 104 to 1 in 311 of the population. The condition of the subsoil as to dampness partly accounts for this; overflowing cesspools, the use of well-water polluted with sewage, the want of house ventilation, and the crowding together of poor and dirty people, are other elements of variation which affect the death-returns; and herein lie the reasons why epidemic disease is "one-third more fatal in Upper than in Lower Merthyr." The distribution of the mortality from phthisis helps to sustain the conclusions of Dr. Buchanan as regards the connexion between the fatality of this disease and dampness of the subsoil.

Merthyr has an excessively high death-rate among child-bearing women, which Mr. Dyke attributes to the fact that as a rule the women are attended by untrained midwives: the usual puerperal mortality is 5 mothers per 1000 births, while in Merthyr there was 1 death of the mother in every 100 confinements, or 9¼ per 1000.

The necessity for proper architectural supervision in the construction of workhouse infirmaries is shown by the sanitary errors committed in the enlargement of the Merthyr Infirmary. "In the partition walls between the wards, windows hung on a centre have been placed near the ceiling; this was done by order of the Poor-law Board. The intention in placing these windows was, that they should act as ventilators; it was forgotten that air passing from one to another ward would be vitiated by passing over the sick in the first ward." Again, in the construction of new closets, the louvre ventilators have been so placed that the current of air must come from without; and as the wards are warmer than the external air, the

draught is always inwards, "and the air is necessarily contaminated by the offensive odours from the closets."

Mr. Dyke states in reference to the cholera epidemic, which attacked 278 persons and killed 136 out of a population of 53,480, between the 24th of August and 9th of November, that in many towns (Llanelly, Swansea, Briton Ferry, Aberdare, and Cardiff) with which the inhabitants of Merthyr are in constant communication, epidemic cholera prevailed previous to the 22nd of August, when the first sickening under the disease seems to have taken place.

With regard to the first cases, Mr. Dyke says:—"It has been distinctly proved to my thorough conviction, that no contact with anything infected, nor with any person affected, nor any communication with each other, could have taken place"; but in the fourth case, that of an aged Irishwoman employed at a rag-store in picking and cleaning rags, "it is very possible that she may have come in contact with clothing brought from Aberdare, where cholera then prevailed."

Mr. Dyke further confidently states, that no pollution of the water-supply of Merthyr with sewage occurred:—"The water used for all domestic purposes by all the inhabitants of the town is derived directly from the lesser Taff river, five miles north of the town, discharged from the main supply pipe into two uncovered receivers at Penybryn, thence it passed into uncovered filtering basins, and then into the covered reservoirs from which Merthyr and Dowlais are supplied. It is true the position of these open reservoirs and filtering beds on the sloping hill-side above Penydarren renders them liable to receive from the winds that blow over them whatever of the seeds of disease may be conveyed through the air; yet it is scarcely possible to imagine such should have been the case in this epidemic, when we remember the sparseness of the first cases, spread over a widely extended surface of hill and dale."

Mr. Dyke subsequently states that "in August a number of persons used water from wells which, being situated near old and deep cesspools, was contaminated by sewage. As to the pernicious influence of such a water Mr. Allday states that he was in attendance upon a tradesman who was affected with and died of cholera; his wife and son were also ill of the disease, but recovered. This family used the water of a well which, upon inquiry at the time, Mr. Allday ascertained, became most offensive when kept for twenty-four hours."

The temperature, both night and day, was higher than usual in the first three weeks of August, and the atmosphere was loaded with moisture. The conclusion arrived at by Mr. Dyke is, that the germs of infection were communicated through the air:—"Arrived in the atmosphere of the town, these germs or seeds would find places where all the necessary elements abounded in which they could propagate themselves in infinite multitudes, for everywhere human excrements were to be seen or smelt. The town infected by the epidemic influence, cholera quickly followed its usual laws; it sought out especially the filthy houses, affected principally the intemperate, the dirty, and the weak, and increasing the number of its victims up to the fourth week, gradually declined, and finally ceased in the eleventh week from its commencement."

The epidemic was fatal in sixty-nine different localities, extending over an area of not less than eight square miles.

MEDICAL TEACHERS' ASSOCIATION.

AT the meeting last Monday, Mr. SIMON, F.R.S., the President, took the chair, and delivered the address, which will be found at p. 115.

Mr. DE MORGAN moved the adoption of the report of the Committee appointed at the last meeting, which runs thus:—"The Committee appointed to report upon the mode in which a uniform method of marking attendances upon lectures and in the wards could be carried out, and upon the minimum which should justify the signature of schedules, met on Thursday, the 12th. Present, Mr. De Morgan (in the chair), Prof. Bentley, Mr. Barwell, and Mr. Holmes. The Committee considers that it might be well to leave the mode in which the names of students are taken down in the class-rooms to be settled in the several schools; but it recommends that for class attendance no certificate shall be given unless the student has attended two-thirds at least of the whole number of lectures given in each course. With reference to the marking of attendance in the wards, the Committee considers that some difficulty may be presented, especially in the larger schools; but it believes that as much as is at present necessary might be effected, if each physician and surgeon were furnished periodically with a list of a given number of students, and that at each visit the attendance of those students who have visited the wards should be marked; the returns of these lists being made at given periods to the Dean or recognised authority, it might be ascertained how often the student had been in the wards altogether. The Committee considers that the same proportionate number of attendances should be required in the wards as is enforced in the class-room. The Committee believes that in the case of large classes the difficulty of marking might probably be overcome by subdividing the class into sections, each of which in rotation should attend the practice of one of the physicians or surgeons in succession for three months, or other convenient interval."

Mr. HENRY LEE remarked that he had on one occasion refused to sign a certificate, but he found that the student went up to the College and passed without it, and that the authorities paid no attention to his complaint upon the subject.

Dr. MILLER suggested an improvement in the resolution, to the effect that the dean of each school should state the names of pupils, the number of lectures and attendances, and should forward the return to each examining board.

Mr. SIMON remarked that the St. Thomas's Hospital Committee had already suggested this mode to the College of Surgeons.

Dr. HANDFIELD JONES said it was impossible for the students to carry out the present regulations in their strictness; and suggested that if a man's conduct was generally good it was better not to attempt impossibilities.

Mr. PARTRIDGE regretted that the committee did not propose to relieve teachers and students of getting schedules signed; and said the College of Surgeons had suggested the signature by the dean. He did not see why a report on dissection should not be appended.

Dr. RUSSELL REYNOLDS sympathised with any effort to ensure habits of industry; but the mere signing of schedules and fixing a minimum of attendance did not secure this object. It was desirable that a guarantee of fitness should depend rather upon examiners than teachers. He thought students were very good judges of what they wanted, and would always go to lectures if they got good from them. He objected to the "habeas corpus" system of compulsory attendance altogether. With regard to hospital teaching, he for his own part thought pupils should be allowed to attend the officer from whom they learnt what they required.

Mr. CHRISTOPHER HEATH said the system of marking only secured the attendance of students for the quarter of an hour during which the marker was present. From his own experience he thought that the supplementing of lectures by examinations—say three quarters of an hour for lecture, and the remaining quarter for examination—was the best way of ensuring attendance and attention; and, besides, it practised students in the very thing they wanted, and for which they resorted to "grinders"—the habit of answering questions.

Mr. HART said that at St. Mary's the system of marking worked perfectly well, and that whilst the regulations of the College were in force the resolutions proposed were the best compromise.

Dr. ANSTIE thought it a pity to attempt to bolster up regulations which must shortly die out.

Mr. HENRY POWER thought if the present regulations were swept away a class of students would idle the whole of their time, and be under no sort of control.

Dr. BARCLAY quite agreed with Mr. Power, and thought it would be most dangerous to do away with all restrictions.

Mr. BARWELL agreed with the last speakers, and upheld the necessity for *discipline*.

Dr. BENTLEY defended the propositions of the Committee, and maintained that the marking as carried out at King's College ensured the attendance of students.

The Report of the Committee was then adopted, with the following addition:—"That, in the opinion of this meeting, it would be expedient for the dean of each school to report to the examining bodies the number of lectures given in each branch of study, and that the number of lectures attended in each case by each student be certified: this report to be substituted for the schedules at present in use."

The recommendation of the Council, "That the Inspector of Anatomy in London for the time being be, *ex officio*, a member of the Medical Teachers' Association," was agreed to after a brief discussion, and the meeting adjourned.

THE HEALTH OF THE NAVY.

NAVAL matters generally are taking a favourable turn, and for the nonce the Fates are propitious to the service. Dr. Mackay, in the Blue Book just published, reports that the health of the Navy during 1866-7 was more satisfactory than for many years past, and this notwithstanding the prevalence of epidemics at nearly if not all the stations to which ships are attached. This general improvement refers to the amount of sickness, of invaliding, and mortality, represented respectively by 12·64, 8, 28·7, and 10·4 per 1000, the total number of men in the service being reckoned at 50,275. These figures represent the lowest ratios which have been observed during a period of eleven years. It may be stated, for purposes of comparison, that in regard to sickness the number of cases on the list was 73·8 per 1000 less than last year; the average of the invaliding for the past eleven years is 34·6 per 1000; the death-rate for the same period 15·1 per 1000. Cholera was epidemic at the Home, Mediterranean, and south-east coast of America stations, yellow fever in the West Indies, small-pox in Japan and China, fever in the Pacific, and the Cape and East Indies; but the Commandants were careful that as little communication as possible was allowed between infected localities and vessels under their command, hence the good result; in part also secured by the activity of medical officers in discovering the first signs of an approaching epidemic, and the value of whose advice in the matter of preventive measures was recognised more distinctly than before, so that prompt and judicious measures were adopted before the full force of disease could develop itself. We are glad to see that Dr. Mackay acknowledges the beneficial influence of the Contagious Diseases Act of 1866. Reference is made, for illustration, to the Royal Marine Division at Plymouth. The amount of primary disease in the Navy, in 1864, was 250, in 1865, 206·4, in 1866, 122·4, and for the first half of 1867, 49·4 per 1000 of force; the total number of men ranging from 1510 to 1836.

The head-quarters of a marine division have been selected to illustrate the beneficial operation of the Act, from the facts that, while the force is less variable, and its conditions are of a more fixed character, than those of the service afloat at a seaport town, and fewer elements of error are consequently liable to be introduced into the data furnished by it, the men of the division are more constantly exposed to the sources of contagion than are the complements of the ships of war.

It is very fairly intimated that, considering the deficiency of accommodation for carrying out the Act, the results are even more satisfactory than they appear, and that the Act is capable, when more effectually worked, of giving much better results than have as yet been obtained.

Proceeding somewhat into details of sickness and mortality, we may note the prevalence in the ships on the Pacific station of influenza, which prevailed in the *Topaze;* of remittent fever on board the *Clio*, to the extent of 237 cases in the Michaelmas quarter and 71 in the Christmas quarter of 1866, and 100 in the Lady-day quarter of 1867. This ship's crew also suffered from syphilis. One-third of the mortality (31 deaths) in the ships on the West Coast of Africa station was caused by fever. The *Octavia*, at the Cape, had on board 307 cases of fever in the Michaelmas quarter of 1866. On the China station 62 cases of small-pox occurred amongst the crew of the *Princess Royal* in the Lady-day quarter of 1867, the source of the mischief being readily traced on shore; altogether 136 cases were recorded, and of these 11 died. Syphilis also was prevalent, and produced a large amount of invaliding. Some interesting facts are stated in reference to ironclad vessels. During the year several of these were newly commissioned, and consequently furnished a number of trifling cases, which raised the amount of the sick-list; but, on the whole, the ironclads are favourably reported. On the Home station the mean ratio of sickness was not only below the average of the station, but, to the extent of 45·7 per 1000 below that of the same class of vessels during the preceding year. The *Achilles*, *Black Prince*, *Caledonia*, *Hector*, *Minotaur*, and *Research* are referred to here; the *Pallas*, *Wivern*, and *Prince Albert*, newly commissioned, had diarrhœa on board. On the Mediterranean station a steady improvement was manifested in the *Royal Oak*, to the extent of 188·9 per 1000 of mean force on the sick-list, as compared with the year before. The *Favourite*, on the North American station, was also a healthy ship.

This Report must be pronounced satisfactory; but it is still certain that to a much greater extent are the amounts of the sickness, invaliding, and mortality, which are every year recorded, preventable. The results already obtained should stimulate to greater exertion. We see that there is still a deficiency of medical officers in the service. The fault lies with the Admiralty; but hopes of a more satisfactory state of things are rekindling at the present time.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, JAN. 14TH, 1868.

MR. SAMUEL SOLLY, F.R.S., PRESIDENT, IN THE CHAIR.

ON THE CURE OF CLEFT PALATE BY OPERATION IN CHILDREN, WITH A DESCRIPTION OF AN INSTRUMENT FOR FACILITATING THE OPERATION.

BY THOS. SMITH, F.R.C.S.,

ASSISTANT-SURGEON TO ST. BARTHOLOMEW'S AND THE CHILDREN'S HOSPITALS.

THE author's object in presenting this paper is to communicate to the Society a plan of operating on clefts of the palate, applicable to all who suffer from the deformity, but especially to children, to those deficient in physical courage and in the power of enduring pain. No attempt is made to improve on the principles of staphyloraphy as laid down by Sir William Fergusson, though slight and inconsiderable modifications in that gentleman's practice are advocated, as more suited to the tender age of the patients, for whom the plan in question is specially designed. The chief novelty in this proceeding is that chloroform can be employed. A painless and speedy operation can therefore be performed, and that with more precision and a greater prospect of success than when the operator is dependent upon the self-control of the patient; while, from the painless nature of the operation, the cure of cleft palate can be effected in children, to whom formerly the benefits of staphyloraphy were virtually denied. The author discusses the probable advantages of the performance of the operation in early life, though he waits for a larger experience to fix the particular age at which it is best to attempt to cure the deformity. The plan of operating recommended depends chiefly for its success on the employment of a gag, whereby the tongue is depressed, the jaws can be opened and fixed, and the orifice of the mouth enlarged. This is adjusted when the patient is under chloroform. The modifications of the ordinary operation as suited to the insensibility of the patient are described. They consist chiefly in avoiding any considerable flow of blood until the very last step in the operation has been accomplished. The author recommends for children the employment of fine fishing gut and horsehair as the best materials for suture, and describes certain modifications in the ordinary shape of the needles employed and the manner of passing the sutures, which simplify and expedite the operation. The conclusions in the paper were supported by cases. Finally, the author stated that he trusted by the lapse of time and further experience to be able to determine the age at which an operation should be done, and the effect of an early operation on articulation and vocal resonance.

Appended to the paper were the accounts of eleven cases where the operation for cleft palate had been performed in the manner recommended by the author—that is, with the aid of a gag, and under chloroform. In eight of these cases the operation was successful; three were failures. No operation had been attempted on the hard palate, though in nine of the cases the deformity involved the bony palate to a greater or less degree. The author expressed a belief that it would in many instances be unnecessary to perform any operation on the bony palate if the cure of the soft parts were effected in early life. In support of this belief he adduced three cases of operation where the soft palate only had been united, and where the hole remaining in the roof of the mouth had gradually contracted to very small dimensions. Sufficient time had not elapsed since the operation in the author's cases to allow him to speak authoritatively on this subject. An easy method of fastening gut sutures without cutting the gut was described. Children were exhibited on whom the operation

had been successfully performed, and one adult was also present, whose palate had been united by operation under chloroform. The author recommended the use of the gag and chloroform for adults as well as children in the performance of this operation. Though the effects of the operation in children on the powers of articulation had been at present highly satisfactory, the author abstained from making any definite statement on this subject, waiting rather for the lapse of time and additional experience to furnish fuller information.

The PRESIDENT complimented Mr. Smith on the excellence of his paper. He remarked that Mr. Smith spoke of vomiting; he would ask if it were necessary to remove the gag to allow the child to get rid of the vomited matters.

Mr. SMITH explained that it was only necessary to do so that the mouth might be cleaned out.

Mr. DURHAM said that although he had been at work on the subject for some time, Mr. Smith had completely taken the wind out of his sails. It was still questionable what was the exact period at which the operation could be earliest performed with a hope of success. No doubt, however, childhood was the great time. In fact, the improvements made in the manufacture of artificial palates rendered the operation in advanced life unadvisable, for it was only in children that much improvement in speech and swallowing was observed. The operation should be performed on patients when below fifteen years of age, and under the influence of chloroform, although this latter somewhat retarded the operation. As a ligature, he thought gut good, but the horsehairs had a tendency to unfold themselves. To facilitate their introduction he employed a needle-holder (which he showed), and found it a useful adjunct. Hitherto he had not used Mr. Smith's gag for any operation on the palate, but had found it most useful in dealing with the tonsils.

Mr. T. HOLMES stated that he had only once had an opportunity of operating in this way; that was in a boy of thirteen. He had proceeded much in the same way as Mr. Smith. He considered the gut likely to be an improvement. To facilitate the operation, it was necessary to give a good deal of chloroform, so that the patient should be completely under its influence. The vomiting after the operation was often obstinate, and constituted one of the serious drawbacks on its success. In future he considered that chloroform would probably be used, as there was no danger with it, the bleeding not being troublesome. He did not attempt to deal with the hard palate.

Mr. STARTIN remarked that silk, if covered with elastic collodion or gutta-percha, was quite as good as anything for ligatures.

Mr. PRESCOTT HEWETT said that in removing the upper jaw, under chloroform, there was in one case of his, the operation being protracted, much hæmorrhage. The patient suddenly died, and it was found that the whole of the air-tubes were completely filled with blood. There were many cases now, however, which showed that the risk from hæmorrhage was not great as a rule.

Mr. CURLING said the hæmorrhage was usually slight, and the blood generally passed into the stomach.

Mr. CLOVER said he had often given chloroform in dental cases where there was considerable hæmorrhage, and the blood always appeared to go down the throat into the stomach. The quantity and rapidity with which it was shed were, he believed, of importance. Under such circumstances he would use a nose-cap for the administration of chloroform. As a material for sutures, he would recommend a structure like the street telegraph—gutta-percha with a copper core. For this he would recommend a kind of needle, which he showed.

Mr. SAVORY remarked on the great advance in practice this paper indicated. In Sir W. Fergusson's operation, the subsequent deficiency of articulation was disappointing. He had several cases, but had never seen complete recovery of speech; hence some think an artificial palate preferable. The question was—Would we get a better result now, operating so much earlier in life? It should be remembered that the opening was more than a mere fissure. A good deal of muscular tissue, especially of the levator palati, was absent, and the most we could do was to substitute a cicatrix for this deficiency. The hard palate, he said, might be left to itself, if the soft was closed. This he had seen again and again. When the opening left was small, it was no impediment. The use of chloroform would depend on surgical opinion as to the best mode of dividing the muscles, whether it should be done from before or from behind.

In reply, Mr. SMITH said that the operation could be more readily performed with than without chloroform. For ligatures, nothing stiff could be used, as they irritated the tongue, and the child pulled them out. Horsehair he thought better than gut, as it did not soften. Vomiting was fatal to the success of the operation, and it occurred independently of chloroform. Mr. Savory's remarks were peculiarly true. The worst specimen of articulation he had ever heard was in one whose palate was entire. In one or two of his cases perfect speech was secured.

MEDICAL SOCIETY OF LONDON.

MR. HENRY SMITH, PRESIDENT.

Dr. GREENHALGH showed and explained an ingenious pelvimeter, by which the pelvis might be measured more accurately than by any other instrument of the kind.

The PRESIDENT exhibited the Upper End of the Femur, which he had removed nine weeks previously from a little boy who had been suffering for nearly a year from disease of the hip-joint. On performing the operation the head of the femur was found dislocated on the posterior lip of the acetabulum, and this cavity was filled up with a fibrous deposit. The head of the bone was deprived of cartilage over half of its extent. The patient was now progressing favourably.

The PRESIDENT also showed the parts concerned in a bony anchylosis of the elbow-joint, after severe injury. The operation was undertaken to remedy deformity, and a wedge of bone was removed.

Dr. SANSOM then read a paper "On Zymosis, with especial reference to Cholera." The author commenced by giving an outline of the theory of zymosis. In tracing the origin of infecting particles we may, he said, divide them into two classes,—first, those arising from the animal world, such as variola, vaccinia, pyæmia; and, secondly, those arising from the vegetable world, as favus, thrush, and, if we are to believe a large mass of scientific evidence, diphtheria, ague, &c. But whether animal or vegetable, it cannot be determined with accuracy, whether the materies morbi is at the period of infection the one or the other. It is best, under such circumstances, to call it "germinal matter."

Dr. SANSOM then related a series of cases which had occurred in his practice, all of which were united by close relations of time, place, and circumstances, and in one of which the "oidium albicans" was discovered as a prime factor in the disease. The author then discussed the operation of disinfectants. He divided them into three classes: 1st. Those which alter the chemical constitution of the "materies morbi," such as chlorine and iodine. 2nd. Those which act partly chemically and partly vitally, such as the sulphites. 3rd. Those which act only on organised material, arresting vitality, such as carbolic acid. The treatment of zymotic disease by the internal administration of the sulphites was then considered, and 41 cases were brought forward in which they had been employed, and in which one death only occurred. The facts seemed to be that the sulphites are the most easily absorbed of our internal antiseptics, but that carbolic acid is the most powerful. The author concluded by saying that the great desideratum was a salt which should combine the two. This desideratum Dr. Sansom had succeeded in supplying, and specimens of compound salts, the sulpho-carbolates, were then exhibited to the Society.

An animated discussion then ensued, in which Dr. Routh, Dr. Hare, Dr. Symes Thompson, and others, took part.

Correspondence.

"Audi alteram partem."

MEDICAL AND NATURAL SCIENCE TEACHING AT OXFORD AND CAMBRIDGE.

To the Editor of THE LANCET.

SIR,—I feel called on to make a few remarks in reply to your correspondent, "Cellula." In the first place, I admit that his jokes on my *nom de plume*, as well as those which you appended to my former letter, are very fair and amusing; but, on the other hand, they have nothing to do with the subject of my communication. It would not be difficult to make similar funny remarks about "Cellula;" but I forbear, partly

because I do not wish to waste paper in chaffing an old Cambridge friend.

I am sorry that my letter has caused a reply from any Cambridge man, for there is nothing to be said. I know all the facts of the case better, I believe, than "Cellula," and merely wished to give outsiders a view of the comparative situation of the two Universities in regard to natural science. It is simply untrue (a mistake, of course, on "Cellula's" part) that the Cambridge Museum excels in comparative anatomy of the vertebrata. Mr. J. W. Clarke, curator of the museum, will tell him, as he has told me, and as I know by experience, that the vertebrates are among the worst parts of the collection, there being no good series, which can be used by a student, of such organs, in fishes, reptiles, birds, and mammals, as the heart, alimentary canal, brain, &c.

Professor Stokes does *not* lecture on experimental physics, but on mathematics. Professor Willis lectures *only* on applied mechanics. I said nothing against the abilities of Professors Sedgwick, Liveing, Humphry, Newton, and Babington, whom I know personally, and greatly regard and respect. I said, and still say, that these professors have no proper assistants, and hence the "staff is inefficient." Professor Sedgwick pays an assistant (Mr. Seeley) out of his own pocket; and Dr. Humphry's stipend as Professor is so small that he felt it right to retain half his practice on accepting the professorship, instead of giving up his whole energies to the chair. Dissection of human bodies is quite in accordance with the traditions of University life; in fact, at one time, Oxford and Cambridge were great in human anatomy.

Having corrected thus one or two of "Cellula's" mistakes, I wish to protest against misrepresentation. I look at medicine with no jaundiced eye, and do not require to be told of the excellence of the profession, being myself a medical student. And further, as to "pointing with scorn" at Cambridge, I could not do so, for I retain the strongest affection for her, and those with her; but I do despise those who withhold from her the means, or money, she has a right to. Were "Cellula" as anxious for the *real* success and progress of his University as I am, he would be ready to admit deficiencies, instead of quite irrelevantly puffing and flattering certain professors, whose merits require no introduction from him.

Finally, I have a more personal grievance to speak of. "Cellula" denies me anything homologous with a liver; and in the last Cambridge Natural Science Tripos papers, I see that the examiner asks why Lumbricus has no perivisceral cavity? I am afraid, Sir, if my anatomy is so little understood at Cambridge, my intentions in writing to you have but little chance of being appreciated there. I do possess what is called "hepatic tissue," and, like all other worms, rejoice in a "perivisceral cavity."

I am, Sir, your obedient servant,

Oxford, Jan. 1868. LUMBRICUS.

DR. GRAILY HEWITT'S PLUG-PESSARY.

To the Editor of THE LANCET.

SIR,—Permit me to make one remark on Dr. Aveling's letter in THE LANCET of the 18th instant, on the plug-pessary described by me in THE LANCET of Jan. 4th.

My friend, Dr. Aveling, is in error in supposing that I consider it "necessary that the stem should be kept rigidly at right angles to the disc." The instrument, as generally used by myself, consists of two distinct parts so adjusted that the stem enjoys a considerable degree of both lateral and forward or backward motion on the disc. It is, in fact, a sort of universal joint, and the separate construction allows of its more ready insertion. On the other hand, it is occasionally convenient, when the instrument has to be worn for some time, to more rigidly connect the two parts previous to introduction; the angle must then be suited to the requirements of the case.

For the rest, it is very gratifying to me to find that in regard to the mechanics of this subject, my views are in accordance with those of such an able man as Dr. Aveling.

I remain, Sir, yours &c.,

Jan. 20th, 1868. GRAILY HEWITT.

TAPEWORM IN BIRDS.

To the Editor of THE LANCET.

SIR,—The observation of tapeworm in the sparrow by Mr. Gentles is interesting; mostly, however, on account of the curious fistula. How to account for that is really a puzzle, unless we imagine that the worm may have been developed in the cellular tissues directly from the cysticercus, a condition which is extremely improbable. Tapeworm is by no means uncommon in birds. I have seen it in young rooks, and grouse frequently have it. Not many years ago there was an epidemic of it on some of the northern moors; and I heard more than one shrewd keeper give an explanation of it which I think will apply to Mr. Gentles' unfortunate sparrow,—viz., that the birds have partaken of dog droppings. Dogs, and in my experience more especially setters, are frequently troubled with tapeworm; their motions are laden with the ova, and frequently joints of the entozoon, so that it is not unlikely that birds would get it from such a source, more especially rooks and sparrows. To the heather-eating grouse the explanation scarcely applies so well; but still it would not be difficult to imagine their accidentally partaking of some food to which ova were attached.

I am, Sir, yours, &c.,

Wakefield, Jan. 1868. LAWSON TAIT.

P.S.—I am quite certain that Von Siebold is right in ascribing the "sturdy" in sheep to the ova of the *tænia serrata* (*solium*) dropped from dogs; and it would be interesting if some experimenter would tell us if a hen fed upon the proglottides of the tapeworm would have the worm instead of the cysts developed in her. L. T.

SULPHURIC ACID BATH IN YELLOW FEVER.

To the Editor of THE LANCET.

SIR,—With reference to the communication of "An Army Surgeon," which appeared in your issue of the 28th December last, I beg to state that when I suggested and used the sulphuric acid bath in the treatment of yellow fever, I had not seen Sir Ranald Martin's work, or any other publication on the subject. I am glad, however, to learn that a similar mode of treatment had suggested itself to a person of Sir Ranald Martin's observation and experience.

I believe that the mineral acids, applied endermically, will be found not only to allay febrile excitement by a diaphoretic action, but also to exercise their special therapeutic effects more surely and more safely than if administered internally in such a disease as yellow fever, where there exist great irritability of stomach and disorganisation of the mucous surfaces; and I hope that this method of using them may be further tried and reported upon.

I am, Sir, &c.,

J. M. GRANT, M.D.,
Deputy Inspector-General.

London, Jan. 21, 1868.

PARISIAN MEDICAL INTELLIGENCE.

(FROM OUR OWN CORRESPONDENT.)

THE good people of Paris are now having some rest and relaxation after the terrible weather which prevailed here, and to combat which all the vital forces of the organism were strained. Your readers have doubtless had from other sources some account of the frosty days which opened the year in this quarter of the world—how the Seine was completely congealed; how nothing of the like had been seen since 1843; how some strong-minded, indomitable people would pursist on walking over the river, notwithstanding the perils of the undertaking and the timely objurgations of friends; how the Government, with paternal solicitude, placed a *cordon sanitaire* of policemen along the quays to save these indomitable individuals from a very cold ducking, if not worse; how there was delight for the Skating Club, and agony for the wretched poor; how in the streets of Paris nothing was to be seen of the human face but blue noses, half hid by huge comforters, and stuck upon shivering figures either bent upon stamping out the cold, or stealing hurriedly along the walls, &c. Enough of this has been said; and I shall content myself with noting that old King Frost, notwithstanding his popular reputation for clearing up the blood and invigorating the spirits, has created his usual havoc among the young and the aged, and has brought a large number of fractures in the hospitals of Paris, the Hôtel Dieu of Lyons, St. André of Bordeaux, &c. We are now

enjoying here some very mild days, crossed, it is true, with some rain and wind, but as a balmy spring when compared to the severe weather we have lately had.

Whether it be owing to the so-said invigorating effects of the cold,—to which I have just alluded,—or rather to the excellent resolutions, and the subsequent bustle which the opening of a new year brings on, the scientific bodies of this place are at present full of life and movement. Of this spirit I have already noted some manifestations in my last letter. The last meeting of the Academy of Medicine was particularly lively and interesting.

M. Ricord has inaugurated his presidency at the Academy of Medicine with an able speech, remarkable for its liberal spirit, great judgment, and happiness of expression. Alluding to the importance and difficulty of his present duties, the orator said that, fortunately for him, he might compare the Academy to a little republic, with a president who reigned but did not govern; the indulgence of its members, the good harmony which reigned among them, the courtesy and calm which characterized their debates, would facilitate his task. In this society the old but charming appellation of "Amenitates Academicæ" would ever be realized. He grieved at the heavy strokes which death had inflicted on the illustrious company during the last year; and, mentioning the names of the departed—Jobert, Trousseau, Follin, Velpeau, Rayer, Petroz, Guibourt, Judieux, Civiale, and Lagneau—he paid a just tribute of praise to the memory of each. Fortunately the Academy had renovated itself in the adjunction of such valuable names as Barthez, Chauffard, Demarquay, Gueneau de Mussy, Hardy, Hérard, Legouest, Mialhe, and Vigla. The orator indicated the elevated position which the Academy occupied among scientific bodies, and marked out its distinctive features. The Academy loved progress, favoured progress; but it served also to moderate progress. "In the human organization the ignition of fever is often a salutary reaction, which it would be imprudent to check. But there is need to keep this reaction within certain bounds, beyond which sedatives would be necessary. In like manner the fever of progress must be controlled, if it is not to become destructive. This protecting watchfulness devolves mostly on Academies. The sedatives of the fever of progress are history, tradition, the constant observation of disease and of the diseased, that human and social desire of relieving the sick and of turning off disease without which our science would be but a vain subject of curiosity or a sterile branch of natural history."

The Academy of Sciences has also proceeded to renew its board. M. Delaunay, the former Vice-President, now sits in the presidential chair, and M. Claude Bernard has been unanimously elected Vice-President, and will therefore step into the presidency next year. Before leaving office, M. Chevreul, the late President, made a short speech, in the course of which he also had to deplore the loss of many members during the last year. Jobert's place is now occupied by Nélaton; M. Wurtz has succeeded Pelouze; Baron Larrey sits in Civiale's stead. But three more seats still remain to be occupied, namely, Velpeau's, Rayer's, and Flourens', and the Academy has not yet elected a foreign associate to take the place of our illustrious Faraday.

Before I have done with the subject of renewal of boards—a subject which is quite *à l'ordre du jour* at this time of the year—I shall just mention that of the Society of Surgery. It may be of interest to note this somewhat important change, at least as far as concerns the three first scientific bodies of Paris. M. Legouest, who occupies the presidential chair in lieu of the regretted Follin, has now taken the chair on his own account, while M. Verneuil has been elected to the Vice-Presidency. *Apropos* of a double election for foreign members, which has just taken place at the latter society, it may be well to remind my readers that the three learned bodies I have named, animated by a courteous and open scientific feeling which cannot be too highly appreciated, have a fixed number of seats which they give by election to foreign medical and scientific men. At the Society of Surgery, for instance, the foreign members form two classes: they are simply corresponding members, or they become associated members, let us say Fellows. At the last elections to which I have alluded, De Graefe, of Berlin, was named a Fellow, while Mr. Pemberton, of Birmingham, Barbosa, of Lisbon, Wilms, of Berlin, and Maxzoni, of Rome, became corresponding members.

You are perhaps aware that in Paris, and, I believe, in some of the larger towns of France, there exists a municipal enactment which compels new-born children to be presented at the respective *Mairies* within the third day after birth. The object of this *presentation* is to insure the regular registration of the population—a measure the benefit of which is obvious. The means adopted for effecting it, namely, the obligation enforced upon parents of bringing their children to the *Mairies*, is a most absurd and cruel custom, which can only tend to increase the already frightful mortality of children. Several medical men had already protested against this measure, when latterly the subject was brought up *de novo* to the Academy of Medecine by a talented young practitioner of Paris, Dr. Gustave Rousseau. The Academy of Medicine agreed that steps should be taken in order to obtain a favourable change, while the Société Protectrice de l'Enfance addressed a petition to the Senate. The petition had been favourably received, and the question appeared to be *sub judice*. At the last meeting of the Academy of Medicine, M. Robinet attempted to make out a case in favour of the *employés* of the *Mairie*. A child had just been born in his family, and he had been so delighted with the amenity of the *employés* on the occasion (instead of requiring the presence of the child they actually contented themselves with a declaration from the accoucheur) as to put the question whether public opinion had not been over-severe towards the implicated officials. M. Robinet's argument was found rather too personal, and indeed produced the contrary effect of rousing afresh the spirit of the Academy. Baron Larrey happily gave an appropriate form to this outbreak of energy, and it was decided on the instant that the Board should the very next day pay a visit to the Minister of the Interior with a view to obtain a better state of things.

At a recent meeting of the Academy of Medicine, M. Avrard, of La Rochelle, read a memoir, in which he discarded all danger in the employment of *intra-uterine injections*, when used according to his method, *à double courant*. Assuming this freedom from all dangerous consequences, the author asserts that they effectuate a cure in mucous metritis and its complications, parenchymatous metritis and the ailments which flow therefrom, versions and flexions of the uterus. They repel the diathetic manifestations developed in the womb. Further, not only is uterine catheterism free from all danger, but it is scarcely painful, or altogether painless, according to the time of employment in the intervals of the periods. These sweeping assertions certainly require to be confirmed.

M. Moutard-Martin, one of the physicians of the Hôpital Beaujon, has been making interesting experiments *on the action of arsenic in phthisis*, the results of which he sums up as follows: 1. The action of the substance is undeniable. 2. It is particularly efficacious when pathisis assumes a slow and torpid course. 3. Acute tuberculosis is in no way modified by its employment. 4. In a great number of cases, even when phthisis is far advanced and attended with hectic fever, the general state of the patient is favourably modified, at least during a certain time. 5. Local lesions are modified more slowly. 6. Success in a certain number of cases must be attributed to the use of the remedy. There would be a greater number of successful cases if the patients persevered in the employment of arsenic. 7. In order to be efficacious, the treatment must be protracted. 8. The doses must be extremely small. 9. It is not necessary to give more than two centigrammes per diem. 10. Contrary to the opinion of certain writers, arsenic is better tolerated by patients who are in the early stages of disease than by those who have reached the period of consumption. 11. When the doses are kept within the limits of from 0·015 milligrammes to 0·02 centigrammes, tolerance becomes indefinite, so to say. 12. Arsenic especially exercises a reconstituting action, and modifies secondarily the pulmonary lesion. Certain facts, however, prove that arsenic possesses a direct action over the respiratory functions: it may exercise an influence on the pulmonary tissue itself and on the tubercle.

In a memoir recently presented to the Academy of Sciences, M. Broca describes a novel group of tumours, which he designates by the name of *odontomes*, and which are constituted by the hypergenesis of transitory or definite dental tissues. According to the period of occurrence, the extent and gravity of the alteration which it determines, the disease which affects these organs may destroy or not their normal property of producing the elements of dentification. *Odontomes* may, therefore, remain in the state of soft tumours, or take a dental consistency, constituting in the latter case irregular dental masses, of sometimes considerable size. M. Broca divides their evolution into three periods: 1, formation; 2, dentification; 3, a state in which dentification is completed, and in which the tumour becomes stationary both as regards its structure and its size.

At a recent meeting of the Medico-Chirurgical Society of Paris, M. Grasl entered into some interesting details concerning the cure of a case of asthma by means of the iodide of potassium. This communication gave rise to various remarks from some of the members. M. Martineau observed that Trousseau had often employed iodide of potassium in similar cases with success. M. Gougenheim asked whether the disappearance of the disease had

not been followed by the production of some other ailment, to which M. Grassi answered in the negative. The patient had been cured since eighteen months, and no morbid symptom whatever had been observed since then. M. Guyot and some other members mentioned that they did not believe, as some writers had observed, that the cure of gout or *migraine* was followed by the appearance of some other disease. M. Simonot, alluding to the curious forms which asthma sometimes assumes, mentioned the case of a medical man who was affected with most troublesome attacks of asthma whenever he resided on land, whereas he became completely free from all symptoms of the disease as soon as he set foot on board a vessel.

At the same sitting M. Bertholle made a communication in which he related a case of syphilitic disease of the testis, with a double fistula, and which got completely cured after three months' employment of a specific treatment. The nature of the disease was not discovered through the state of the testis itself, but through the existence of other symptoms, such as periostosis of the arm and forearm. The patient had had a chancre about twenty years before; but since then no further symptom had manifested itself. The iodide of potassium was first administered with success, and was followed by Van Swieten's liquor, which brought on a complete change at the end of the third month since the patient had been first seen. M. Bertholle drew a twofold conclusion from the details of the case: the tendency of syphilis not to cure spontaneously, and the marvellous efficacy of a specific treatment. This led other members to express themselves in most satisfactory terms in regard to mercury, and to wonder how some medical men could have latterly attacked this really inestimable remedy.

Paris, Jan. 22, 1868.

EDINBURGH.

(FROM OUR OWN CORRESPONDENT.)

THE first conversazione of the season was held at the College of Surgeons on Friday evening, the 17th instant. A lecture was given by Professor Bennett "On the Atmospheric Germ Theory." The company were received by the president, Professor Spence, in the Museum, and included many of our distinguished citizens. The lecturer reviewed the opinions of various observers who allege that the germs of animal and vegetable growths float in the air, and these depositing in fluids, give rise to the forms of life found therein. He stated the results of many experiments performed by himself, and exhibited infusions which had undergone various chemical manipulations; and described how the air, before being admitted to the flasks in which they were, had been treated. It had been passed through sulphuric acid, liquor potassæ, and a high temperature, and still in most of the flasks the appearance of growths were visible. He further alluded to the frequency with which a growth of one kind was found in an infusion contained in a deep glass, whilst a growth of another kind was found in the same infusion contained in a shallow plate on which the deep glass was placed—both being subjected to the influence of the same atmosphere by being covered with a bell-glass. He also described the progressive forms found in these infusions: first there were Bacillaria and vibrio, but before other animalcules were found these had broken up. He thought that alternate generations in the infusory animalcules was not improbable, and gave his views at some length as to the growth of the lower organisms from molecules. He was of opinion, from his experiments, that the development of these germs in infusions could be explained by reference to the temperature, the density, and the chemical nature, but seemed to give the chief importance to the first. This interesting lecture was concluded by referring to the theological view of the matter.

This lecture has come at good time, for at present popular sympathy is elicited in favour of the treatment of nearly all diseases by sulphur-spray or fumigation. Dr. James Dewar, of Kirkcaldy, Fifeshire, lately published a pamphlet "On the Application of Sulphurous Acid, Gaseous and Liquid, to the Prevention, Limitation, and Cure of Contagious Diseases." In this he advances the theory that the zymotic diseases arise from parasitic growths, that sulphurous acid is the best parasiticide, and that diseases from the Cattle Plague to chilblains are to be treated by means of it. Other medical men have recommended the employment of this agent, but the most enthusiastic supporter of the treatment is Mr. Robert Pairman, L.R.C.S., Biggar. He also published a pamphlet, "The Great Sulphur Cure brought to the Test," which has reached the seventh edition. Dr. Dewar has introduced the use of sulphurous acid spray which has been used with benefit in diphtheria, croup, and diseases of the throat. It has also been recommended in pulmonary phthisis, but in this disease the benefit derived from it is less manifest. The popular form of using the remedy is by burning pastilles made of sulphur and charcoal, these are used for healing affections of the throat and chest, and for the fumigation of rooms or clothes. The application of the spray to the throat has been frequently found very useful, and as observations are being made by many of our hospital physicians and general practitioners we shall soon no doubt have some further evidence on the advantages and disadvantages of this long used drug, and on the correctness of the theory on which it is recommended.

"THE LANCET" REPORT ON WALSALL WORKHOUSE.

OUR readers will have observed the challenge thrown out to our Commissioner, in Thursday's *Times*, to reply to the attack on his report on Walsall workhouse, made by Mr. Andrew Doyle, the Poor-law inspector of the district. We particularly recommend to the attention of the public the evidence of Mr. Doyle's merits as a Poor-law inspector which is afforded by Dr. Smith's report on Birkenhead workhouse, and Mr. Doyle's report on the same, which are printed on opposite pages of the set of Provincial Workhouse Reports that has just been published, and to which we have referred in another column. But for a full and complete exposure of the truth in the matter, the public must wait till an impartial inquiry is held, or at least till our Commissioner's detailed reply, which has been sent to Lord Devon, has been called for in the House of Commons, as it certainly will be early in the approaching session.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College on the 21st and 22nd inst.:—

Blue, William Archibald Sinclair, Strathalbyn, S. Australia.
Bradford, Robert Mark, Exeter.
Brett, Francis Charles, Burlington, Yorkshire.
Cass, Henry, St. George's road, Pimlico.
Chapman, Henry Thomas Hush, Lower Seymour-street.
Chilcote, Herbert Nicholas, Babbicombe, Devon.
Danaher, James Williams, Plaistow.
Dawson, Frederick Adams, British Guiana.
Dunne, Thomas Vincent de, Stotfold.
Evans, John, Cardiff.
Evans, Owen Thomas, Bangor.
Furnivall, Charles Henry, Ebury-street, Pimlico.
Gill, Henry Clifford, Kentish-town.
Gosse, John, Poole.
Hall, Richard Strange, Leigh, near Manchester.
Jackson, Edward, Darlington.
Jones, Charles John, Anglesey.
Kingsy, David, Dundas, Canada.
Kenyon, John Edward, Hooton Pagnell.
Littleton, Philip Richard, Plymouth.
Lloyd, John, Abergwili, Carmarthen.
Lorimer, John Archibald, Maida-vale.
Lucas, Richard Clement, Compton, near Petersfield.
Lyne, Henry, Plymouth.
M'Donald, John Chisholm, Claverton-street, Pimlico.
M'Kay, Hugh Munro, Woodstock, Canada.
M'Larty, Duncan, St. Thomas's, Canada.
Marsh, John Wilford, Wickhambrook, Newmarket.
Marshall, Frederick, Kentish-town.
Morris, David Edward, Carmarthen.
Parr, George Charles, Cambridge-street, S.W.
Prior, Richard Henry, Chichester.
Renshaw, Bernard, Lee, Kent.
Tason, Gude Wallace, Banffay, Suffolk.
Walker, John Robert, Clifton-gardens, Maida-hill.
Withington, James Bissell, Hereford.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on the 16th inst.:—

Baylis, William Edward, Longfleet, Poole, Dorset.
Parkinson, Edmund Wollaston, Shere, Guildford.
Seccombe, Edward Hepburne, Cedars-road, Clapham.

The following gentleman also on the same day passed his first examination:—

Tichurst, Augustus Rowland, Guy's Hospital.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—The following gentlemen obtained the Licences in Medicine and Midwifery, in October, November, and December last :—

Carroll, T. E., Dundalk.
Curran, E. J., Ennistymon.
Dodd, W. H., Killorglin.
Eames, H., Dublin.
Fitzgibbon, F., Rosscarbery.
Frazer, P. T., Donaghmore.
L'Estrange, A. H., Rathmines.
L'Estrange, F. A., Rathmines.
Macken, R., Dublin.
Molloy, M. H., Dromore, Co. Tyrone.
Riordan, H. De R., Youghal.
Robinson, R. H., Parsonstown.
White, H. B., Kilmoylan.
Wilkin, T. J., Lisbellaw.
Williams, E., London.

The following obtained the Licence to practise Medicine :—

MacCarthy, R. V., Dublin.
Moore, W. D., Dublin.
Thornton, D., Kinnetty.
Torney, T., Dublin.

The following obtained the Licence in Midwifery :—

Brown, J., Dublin.
Fitzpatrick, J. F., Mallow.
McDermott, W. M., Foxford.
Purcell, T., Dublin.
Wood, G. V., Bathgar.

THE fever still prevails at the Cape, but in less amount.

FROM the 1st of July to the 30th of September, 1867, no less than 1903 deaths from yellow fever occurred in the city of New Orleans.

THE two journals of medicine of the Southern States of America, the *New Orleans Medical and Surgical Journal*, and the *Southern Journal of the Medical Sciences*, have been amalgamated under the latter title.

An "Observer" calls attention to the fact that, on January the 17th, the deaths of thirteen persons were recorded in the obituary of *The Times*, whose united ages amount to 1122 years, an average of eighty-six years four months each.

THE New York Legislature is said to have granted a charter to a "Homœopathic Mutual Life Insurance Company," whose peculiarity is that the lives of those who adopt what is designated as "the homœopathic treatment of diseases" are to be insured at "judiciously reduced rates" in comparison with the benighted disbelievers in the *similia similibus curantur* principle.

YELLOW FEVER has entirely ceased in Bermuda, no case having occurred since the latter end of November last. The troops, which had been encamped on the appearance of the disease, have returned to their quarters in barracks at St. George's. The sanitary state of this place is not by any means what might be wished.—*Army and Navy Gazette.*

THE DUBLIN UNIVERSITY MEDICO-CHIRURGICAL SOCIETY was recently formed by some of the senior students of Trinity College, with the assistance of the professors and the sanction of the board, for the purpose of reading essays and holding debates on medical and collateral subjects. The following officers have been appointed for the session 1867–68 : President : Dr. Stokes, Regius Professor of Physic. Vice-Presidents : Dr. B. G. McDowel, Dr. R. W. Smith, Dr. R. Law, Dr. J. Banks, Dr. A. Smith, Dr. E. B. Sinclair, Dr. A. Dickson, Dr. J. Apjohn, Dr. R. Travers, Rev. S. Haughton, Dr. E. H. Bennett. Council : Messrs. J. C. Boyd, W. E. Batteraly, C. E. Fitzgerald, W. H. Gregg, R. J. Harvey, G. P. Farrell, F. Taylor. Auditor : Mr. E. W. Collins. Treasurer : Mr. J. W. Moore. Secretary : Mr. W. H. Bradshaw.

PUBLIC RECOGNITION OF MEDICAL SERVICES. — We are glad to be able to publish the following evidence of the appreciation at head-quarters of the services of a deserving army-surgeon in the form of a letter from the Adjutant-General, which the Major-General Commanding in Jamaica has recently published in his Orders :—"Horse Guards, Oct. 31st, 1867.—Sir,—Having submitted to the Field-Marshal Commanding-in-Chief your letter of the 22nd ult., relative to the visitation of yellow fever in the 84th Regiment, I have it in command to acquaint you that his Royal Highness perused with much gratification the favourable terms in which you report the exertions and admirable arrangements of Major Hardy, and all the officers of the regiment, to insure the comfort of their men. The manner in which Surgeon Clarke appears to have performed his onerous and anxious duties redounds highly to his credit, and you will be good enough to cause the expression of his Royal Highness's satisfaction at his conduct to be made known to that medical officer.—I have, &c., (Signed) W. PAULET, Adjutant-General." We congratulate Dr. Clarke upon the recognition thus conferred, which we could wish were of a more substantial nature.

HALF A CENTURY'S PROFESSORSHIP. — Dr. Berard, professor of chemistry at the Faculty of Medicine of Montpellier, was appointed to that chair in 1817 ; and, on the occasion of his commencing his fiftieth session, the professors of the schools, and most of the scientific men of the other faculties, offered him a dinner. The worthy doctor's sons, and his son-in-law, were invited from Paris to share in this mark of respect ; and the Secretary of State for Education, with exquisite taste, sent M. Bérard on the very day the cross of Commander of the Legion of Honour. The speeches on the occasion were most touching, and gave expression to feelings extremely creditable to the speakers and the venerable professor, who has, with such universal approval, so long and so worthily occupied an important chair.

METROPOLITAN POOR-LAW MEDICAL OFFICERS' ASSOCIATION.—A quarterly meeting of the above Association will be held at the Ship Hotel, Charing-cross, on Friday, the 31st inst., at 7.30 P.M., when various subjects of interest to Poor-law medical officers will be brought forward for discussion : among them the provision of medicines, &c., by the guardians, under the Metropolitan Poor Act, 1867; the appointment of dispensers to workhouse infirmaries ; and special dietaries for all classes of workhouse inmates. Reference will also be made to the large amount of desk work imposed on medical officers, and remedies suggested. Important correspondence with the Poor-law Board will be laid before the meeting. Medical officers who have not joined the Association, and all persons interested in the welfare of the sick poor and of the medical service, are earnestly invited to attend.

M. VACHER ON THE CONSUMPTION OF BEVERAGES IN LARGE TOWNS.—This paper, published in the *Gazette Médicale de Paris* of the 11th of January, 1868, contains instructive facts, of some value to the statistician, moralist, and medical man. A passage of this paper, however, shows how little authors know the countries the published statistics of which they consult, and which form the basis of their statements. M. Vacher, in speaking of the 150,000 (?) habitual drunkards of London, says : "This does not include the drunkards of *high life*, who, within their own dwellings, *gorge* themselves with port wine and *gin*."

MR. JUSTICE BYLES with a common jury tried a rather singular action for libel on the 18th instant. It was brought by Mr. Christmas, a surgeon at Hounslow, against Mr. Thomason, the proprietor of a local paper called the *Middlesex Chronicle*, and the libel complained of was a report of certain proceedings before the Guildford magistrates, in which it was said that Mr. Christmas had been fined 40*s.* for poaching. Mr. Christmas had not, in fact, been summoned at all, but a person named Hewitt, who had been fined, as the report stated, had given that gentleman's name. On the defendant being written to by the plaintiff's solicitor, he said that he copied his report from the *County Chronicle*. The proprietor of the *County Chronicle* had inserted in his paper a handsome apology on finding out what the facts of the case were. The fact seemed to be that the defendant (or as he now said his son, acting without his authority), believing that Mr. Christmas had really been summoned and fined, had slightly modified the report to his prejudice. The judge told the jury that if the report was *bond fide* it was privileged. A verdict for £50 was given for the plaintiff.—*Pall Mall Gazette.*

THE NATIONAL COTTAGE HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, VENTNOR.—Since the last announcement the following additional contributions to the building fund have been received :—Sir William Martins, £50; Sir H. Percy Gordon, £21; Lady M. Gordon, £21; G. Young, Esq., £25; Misses Ward, £21; H. Ingalton, Esq., £21; Capt. B. Kerr, £21; Mrs. Prescott, £21; C. Morrison, Esq., £10; E. Homan, Esq., £21; Raikes Currie, Esq., £21; J. Pennethorne, Esq., £5; Viscount Somerton, £5, J. Fleming, Esq., £21; Mrs. Malcolm, £21; T. Piper, Esq., £1 (annual); Rev. C. Eley, £10; The Bishop of Worcester, £10; The Hon. E. A. Pelham, £21 ; Sir Lawrence Peel, £10 10*s.* (annual, £5 5*s.*); Captain Oliver, £5 5*s.*; Lord Egmont, £25; Captain Phillimore, £10 10*s.*; J. B. Martin, Esq., £10 10*s.*; W. Duckworth, Esq., J.P., £21; J. E. B. Eyre, Esq., £21; J. C. Sharpe, Esq., £1 (annual); J. Holdsworth, Esq., £21; Henry Huth, Esq., second donation, £21; Dr. Hassall, £21; Frederick Leaf, Esq., £21; Mrs. Leaf, £21; W. S. Soames, Esq., £21; the Marquis of Exeter, £10; W. G. Shedden, Esq., £25; T. Blackwell, Esq., £10 10*s.*; Mrs. C. Bailey, £5 5*s.*; Hon. Mrs. Packenham, £1; the Editor of THE LANCET, £5 5*s.*

MEDICAL APPOINTMENTS.

W. SCOTT AITKEN, M.B., has been appointed one of the Surgeons to the Greenock Hospital and Infirmary.

W. C. ARNISON, M.D., has been appointed Surgeon to the Newcastle-upon-Tyne Infirmary, vice Sir John Fife, F.R.C.S.E., appointed Consulting Surgeon.

R. BARROW, F.R.C.S.E., has been re-elected Medical Officer of Health for Ryde for the ensuing year.

H. C. BASTIAN, M.D., M.R.C.P., has been elected Assistant-Physician to the National Hospital for the Epileptic and Paralysed.

Dr. CAMPBELL, of Aboghill, has been appointed, temporarily, Medical Officer to the Constabulary, Toome, Co. Antrim, vice R. Little, L.R.C.P.Ed., deceased.

G. C. COOPER, M.D., M.R.C.S.E., has been appointed one of the Physician-Accoucheurs to the Royal Maternity Charity.

Mr. J. DICKINSON has been appointed Certifying Surgeon under the provisions of the Factory Acts for the Middlesborough District.

R. DOWELL, M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Kirton District of the Boston Union, Lincolnshire, vice W. J. Marsh, M.R.C.S.E., resigned.

E. ELLIOTT, M.D., has been appointed Medical Inspector for the Port and District of Portsmouth under the provisions of the Merchant Shipping Act of 1867.

A. FALKNER, L.R.C.P.Ed., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Tinahely Dispensary District of the Shillelagh Union, Co. Wicklow, vice I. W. Usher, L.R.C.P.Ed., appointed to the Glencullen Branch of the Dundrum and Glencullen Dispensary District of the Rathdown Union, Co. Dublin.

M. F. GAVIN, M.D., M.R.C.S.I., Assistant-Oculist at the City Hospital, has been appointed Assistant-Physician to Out-patients of the City Hospital, Boston, U.S.

H. A. GRIBBIN, M.D., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Moyntaghs Sub-district of the Lurgan Dispensary District of the Lurgan Union, Co. Armagh, vice R. Graham, L.R.C.S.I., resigned.

J. H. HATCHELL, L.K.Q.C.P.I., has been appointed Resident Medical Superintendent of the Maryborough District Lunatic Asylum, vice T. W. Shiell, M.B., appointed to the District Lunatic Asylum at Enniscorthy.

Dr. W. P. HOOD has been appointed Honorary Medical Officer to the Royal Masonic Institution for Boys, Wood-green, in the room of Dr. Thiselton Dyer, deceased.

L. JOYCE, M.R.C.S.E., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Ballibay Dispensary District of the Castleblayney Union, Co. Monaghan, vice J. S. A. Cuningham, M.D., deceased.

J. J. LAY, M.D., Medical Officer for District No. 3 of the Blything Union, Suffolk, has been appointed Public Vaccinator, vice H. Gramshaw, M.R.C.S.E., resigned.

R. MACNAB, M.D., F.R.C.S.Ed., has been appointed Surgeon to the Gaol at Bury St. Edmunds.

G. MICKLEY, M.A., M.B., has been appointed Assistant Medical Officer to the Three Counties Asylum, Arlesey, Beds.

W. P. MILLS, M.D., has been elected Public Vaccinator for St. Margaret's District, Ipswich, vice Bullen, resigned.

R. D. POWELL, M.D., M.R.C.P., has been elected Assistant-Physician to the Hospital for Consumption, Brompton, in the place of Dr. Stone, resigned.

R. J. PYMAR, L.F.P. & S. Glas., L.S.A., &c., has been appointed Medical Officer to the Hailsham Workhouse and to the Hellingly District of the Hailsham Union, vice J. Fletcher, M.R.C.S.E., deceased.

W. SKENE, M.D., L.R.C.S.Ed., has been appointed Certifying Factory Surgeon under the provisions of the Factory Acts for the District of Troon, Ayrshire.

B. A. SMITH, M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Sibsey District of the Boston Union, Lincolnshire, vice P. Cowee, M.R.C.S.E., resigned.

W. E. SMITH, M.R.C.S.E., has been appointed Medical Officer for District No. 1 of the Toxteth-park Township, vice G. Shearer, M.D., resigned.

A. STEWART, M.B., C.M., has been appointed Resident House-Surgeon to the Greenock Infirmary, vice N. M'N. Campbell, M.D., resigned.

MILITARY AND NAVAL MEDICAL APPOINTMENTS.

J. C. BAILEY, Acting Assistant-Surgeon R.N., has been appointed to the "Blanche."

T. L. BICKFORD, M.R.C.S.E., Assist.-Surgeon R.N., has been appointed to the "Jackal."

J. BLACKSTONE, jun., M.R.C.S.E., has been appointed Surgeon 20th Middlesex Rifle Volunteer Corps, vice Mott, resigned.

W. H. CHARLESWORTH, Acting Assist.-Surgeon R.N., has been appointed to the "Defence."

R. DAVIS, M.R.C.S.E., has been appointed Assist.-Surgeon 8th Durham Rifle Volunteer Corps, vice Saville, resigned.

J. W. FISHER, M.D., Acting Assist.-Surgeon R.N., has been appointed to the "Royalist."

W. HARVEY, M.R.C.S.E., Assist.-Surgeon R.N., has been appointed to the "Beacon."

A. HAY, M.D., has been appointed Hon. Assist.-Surgeon 2nd Dumbartonshire Rifle Volunteer Corps.

J. B. KENNEDY, M.R.C.S.E., Assist.-Surgeon 3rd Essex Artillery Volunteer Corps, has been promoted to Surgeon.

J. LINDSAY, Acting Assistant-Surgeon R.N., has been appointed to the "Victory" (additional).

J. M'CARTHY, Acting Assistant-Surgeon R.N., has been appointed to the "Victory" (additional).

G. MOLLOY, L.R.C.S.I., Surgeon R.N., has been appointed to the "Blanche."

F. F. MORGAN, M.R.C.S.E., Surgeon R.N., has been appointed to the "Defence."

O. PENPOLD, M.R.C.S.E., has been appointed Assist.-Surgeon 19th Middlesex Rifle Volunteer Corps, vice Dalton, deceased.

J. W. REID, M.D., Staff Surgeon R.N., has been appointed to the "Mersey" (additional).

M. F. RYAN, Acting Assist.-Surgeon R.N., has been appointed to the "Royal Adelaide" (additional).

C. H. SLAUGHTER, M.R.C.S.E., Surgeon R.N., has been appointed to the "Royalist."

G. V. WRIGHT, M.D., Assistant-Surgeon R.N., has been appointed to the "Mersey" (additional).

Births, Marriages, and Deaths.

BIRTHS.

On the 10th inst., at The Middle House, Mayfield, Sussex, the wife of Henry Harland, M.D., of a son.

On the 13th inst., at Worcester-street, Gloucester, the wife of W. B. Cooke, M.D., of a son.

On the 15th inst., at Kennington-park-road, S., the wife of J. Dodd Swallow, M.D., of a son.

On the 16th inst., at Granard, Co. Longford, the wife of C. F. York, L.R.C.S.I., of a son.

On the 17th inst., at Weymouth, the wife of Henry Tizard, M.D., of a son.

On the 20th inst., at Upper Clapton, the wife of Dr. Kingsford, of a son.

MARRIAGES.

On the 7th inst., at St. Jude's Church, Southsea, John Luiné Perry, Captain Royal Navy, eldest son of John Perry, Esq., of Eastbourne, late of Eaton-square, to Edith Lilla, eldest daughter of Ernest Elliott, M.D., of Warwick House, Southsea.

On the 9th inst., at St. Cuthbert's Church, Benfieldside, Co. Durham, Dr. Thomas R. Pearson, of Stowmarket, Suffolk, to Miss Jane Ritson, of Shotley-bridge.

DEATHS.

On the 14th inst., at Grove House, Batley, Mrs. Stockwell, aged 21.

On the 14th inst., A. M. Wilson, L.F.P. & S. Glas., of Manchline, Ayrshire, aged 32.

On the 15th inst., S. Thompson, M.R.C.S.E., of Mile-end-road, aged 30.

On the 15th inst., A. R. Stookes, M.D., of Rodney-street, Liverpool.

On the 15th inst., W. G. T. Dyer, M.D., of Berkeley-street, Berkeley-square, aged 55.

On the 16th inst., at The Lodge, Higher Brixham, Devon, William Tucker, L.R.C.P.L., M.R.C.S.E., &c., aged 78.

BOOKS ETC. RECEIVED.

Laurence's Die Optischen Fehler des Auges. (Kreuznach.)
Dr. Addison on Two Species of Inflammation.
Dr. Elliot's Obstetric Clinic. (New York.)
Usez de Votre Initiative, &c. Par Dr. J. Bernard.
Prof. Giordano della Perdita Involontaria d'Orina, &c. (Torino.)
Dr. Duncan's Researches in Obstetrics.
Guy's Hospital Reports. Vol. XIII.
Mr. Dixon's Spiritual Wives.
&c. &c. &c.

ABSOLON *VERSUS* STATHAM.

THE following subscriptions have been received since last week's issue:—

Thos. Hopgood, Esq. ...	...	£1	1	0	J. Brown, Esq.	...	£0 10 6
Dr. F. H. Thomson ...	...	1	1	0	J. H. Parkinson, Esq....	...	1 1 0
D. J. Cask, Esq.	...	1	1	0	W. A. N. Catlin, Esq. ...	...	2 2 0
— Gilbert, Esq.	...	1	1	0	Ditto, ditto, jun., Esq....		1 1 0
D. Cormack, Esq.		1	1	0	Walter Campbell, Esq. ...		0 10 6
Spencer Watson, Esq....	....	0	10	6	Alfred Leggatt, Esq.		1 1 0
T. Petty, Esq.		1	1	0	Dr. C. J. B. Williams... ...		2 2 0
E. H. ..ing, Esq....		2	2	0	C. G. Nightingale, Esq. ...		1 1 0
T. P. Payne, Esq....		1	1	0	H. J. Perkins, Esq.		1 1 0
R. C. Pilling, Esq.		1	1	0	Robert Hepburn, Esq. ...		2 2 0
R. Reid, Esq., Edinburgh ...		2	2	0	D. Hepburn, Esq.		1 1 0
Sidney Longhurst, Esq. ...		1	1	0	D. D. Hepburn, Esq.		1 1 0
R. Helfrich, Esq....		1	1	0			

Contributions continue to be received by the following gentlemen, members of the Executive Committee:—

Dr. Richardson, F.R.S., 13, Hinde-street, W.
Dr. Cholmeley, 40, Russell-square, W.C.
Saml. Cartwright, Esq., 32, Old Burlington-street, W.
W. A. Harrison, Esq., 10, Keppel-street, Russell-square, W.C.; and
Edwin Saunders, Esq., 13A, George-street, Hanover-square, W., Honorary Treasurer.

PADMORE FUND.

THE following subscriptions have been received in aid of the distressed family of the late Mr. Padmore, of St. Helier's:—

J. E. Erichsen, Esq.	£2	3	0	E. J. A., East Retford ...	£1	1	0
Thos. Paget, Esq., Leicester	3	3	0	D. M. B., St. Bartholomew's	1	1	0
Dr. Pennington, Liverpool .	1	1	0	Mr. Langston	0	10	0
Joseph Bell, Esq., Edinburgh...	1	1	0	Postage Stamps	0	3	0
Dr. Tanner	1	1	0	Dr. Monro	1	1	0
Dr. Wakley	1	1	0	Ernest Hart, Esq.	1	1	0
S. W. W.	1	0	0	A Friend, Tenbury	1	1	0
				M. Clarke, Esq., Bristol ...	1	1	0

Medical Diary of the Week.

Monday, Jan. 27.

ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 1½ P.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Lettsomian Lectures. Dr. George Buchanan, "On Bronchitis and Emphysema in Children."

Tuesday, Jan. 28.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Mr. Thomas Bryant: "Colotomy in a Case of Vesico-Intestinal Fistula."—Mr. Curgenven, "On Infantile Remittent Fever."

Wednesday, Jan. 29.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
OPHTHALMIC HOSPITAL, SOUTHWARK.—Operations, 2 P.M.

Thursday, Jan. 30.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 1 P.M.
ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

Friday, Jan. 31.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.

Saturday, Feb. 1.

ST. THOMAS'S HOSPITAL.—Operations, 9½ A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 1½ P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

To Correspondents.

COUNTRY WELLS.

PROFESSOR ATTFIELD, in a letter to *The Times*, draws attention to the carelessness with which the site for a well is often selected, and recommends householders to do something more than smell a specimen of water suspected to be polluted. "The water-supply of London and large provincial towns has received much attention, and Commissioners are looking after our rivers as sources of potable water; but wells, on which the majority of us depend for daily drink, have never obtained effective public notice, and, as a consequence, are still generally sunk where most liable to contamination, still often receive the contribution of sewers, &c., carelessly laid within a few feet or inches of the well wall. Every well is but a reservoir for rainfall, an underground cistern, into which rain naturally drains after having run a longer or shorter journey through the ground. How important, then, that it should be sunk where nothing but rain can enter, and where the soil in its vicinity can be jealously guarded from intrusion of anything coming under the denomination of sewage! Yet what is the fact? A builder reflects that the time and labour of servants will be economised if the pump be placed within or close to the house, that waste of pipe will be avoided if the well be close to the pump; under the pump-spout he must necessarily have a sink and drain, and down the drain will all sorts of refuse be thrown. Sooner or later the drain leaks, and fouling of the well follows. Let the pump, drain, and kitchen keep company by all means; but sink the well far from the house, far from any drain, cesspool, pigsty, or other possible source of pollution. Mineral matter dissolved from the soil is comparatively harmless; animal and vegetable matter may be harmless, but may be poisonous, and must, therefore, be kept out by every precaution. Good soil is here our best friend, Nature's own purifier, entirely destroying the substances last mentioned, if only allowed to have fair play; but its power for good is limited, its power for harm terrible when saturated by drainage from adjacent accumulations of filth. Polluted water does not generally betray its condition till possessed of a strong odour. Earlier intimation may, however, be obtained by the following tests:—Half fill a common water-bottle, cover its mouth with the hand, violently shake for a minute, and quickly apply the nose. If nothing unpleasant is detected, tightly cork the bottle, set it aside in a warm place at about the temperature of one's body for a couple or three days, and repeat the shaking, &c. Water of very bad quality may thus be recognised without the trouble and expense of analysis."

THE ARMY MEDICAL SERVICE.

Academicus writes a good letter on the Army Medical Department, which press of matter prevents us from inserting at length. He takes as his text an editorial article that appeared in a contemporary a short time ago. With much of what is said by the writer of that article he fully agrees, and nowhere more so than when he says, in respect of the medical officer's position in the service, that it is very much what the merits, bearing, and good sense of the individual himself make it. But there are still some points requiring amendment before the service can attract, as it ought to do, a regular supply of thoroughly good men; and in respect of these he says the author of the article has fallen into mistakes, as anyone may see by a glance at the Army List. During last year, 66 assistant-surgeons were promoted to the rank of surgeon. This is so far well *for one year*. But the average promotions for the three years preceding were only 25. Of the 68 assistant-surgeons of 1855, only 9 have been promoted, 59 still remaining; and there are 111 assistant-surgeons of 1858, now in their tenth year of service, with 133 above them, who must all be promoted before the first of them is reached. The great remaining grievance—slow promotion—can be removed (says our correspondent) only by rectifying the enormous disproportion in numbers between the assistant-surgeons and the higher grades. The total number of medical officers in the army is 1074. Of these there are 45 in the higher administrative ranks, 357 surgeons-major and surgeons, and no fewer than 672 assistant-surgeons. Contrast this with the naval service, where the total of medical officers is 532. Of these, there are of inspectorial rank, 23; staff surgeons and surgeons, 269; assistant-surgeons, 240. He is aware that the conditions and arrangements of the two services are necessarily different; also that recently the number of assistant-surgeons in the navy was not quite complete, and may still be somewhat deficient; but in the navy the number of surgeons alone is always greater than that of assistants, and it is surely not unreasonable to ask that in the army they should be as two to three, or that, of the 1030 executive medical officers, there should be 410 surgeons (including surgeons-major) to 620 assistants. Another means of accelerating promotion, and at the same time of attracting good men to the service, would be the offer of greater advantages in point of retirement. The new offer of retirement after twenty years' service is coupled with such a forfeiture of half pay as must render it nugatory. The retirement after twenty-five years' service is only 18*s.* 6*d.* per diem. The pension of £1 is attainable only by serving to the period of compulsory retirement, fifty-five years of age, which involves, usually, thirty years' service. "Academicus" concludes by saying that, although the pay of 10*s.* a day at the outset is above what can be expected by the average of young medical men in private practice, when the unavoidable expenses of a military life are taken into account, the pecuniary advantage is, on the whole, on the side of private practice. But it is in respect of the payment at a more advanced period of service, and the retiring pension, that he mainly questions the sufficiency of the rates now fixed for the army to attract the best class of men.

Dr. Diver.—The particulars of the case are not sufficiently clear from the report contained in the *Bombay Gazette*.

A Subscriber might, no doubt, obtain the information from Dr. Lankester.

LODGINGS AND FOOD AT NICE.

To the Editor of THE LANCET.

SIR,—I have just read in several English newspapers extracts from a letter to the *Pall Mall Gazette*, which say that the state of affairs both at Cannes and Nice is not at all pleasant—viz.: "Both of these watering-places are full to overflowing. New-comers can scarcely obtain food and lodging on any terms, and the necessaries and luxuries of life are positively at famine prices. The surrounding mountains are covered with snow."

As such assertions must have a very embarrassing effect on our professional brethren at home, permit me, through THE LANCET, to give the statement a most emphatic contradiction. It is quite true that this is a very full season; but still there is ample room for all who may either chose or be obliged to come here (Nice). Provisions are most abundant and reasonable as to prices. Best beef, mutton, or lamb, at 8½*d.* (English) per lb; butter, milk, bread, eggs, fish, game—in fact, every article of food,—at prices equal to, if not less than, those in any large English town.

I speak of myself for Nice only. But from what I can learn from my friends at Cannes, matters appear to be much in the same state there—i. e., no dearth either of food or lodging. The surrounding mountains, it is also true, are covered with snow; but that is the case every year, perhaps a little more so this season, the weather having been unprecedentedly severe in the central and northern departments of France this winter. But at Nice the sun shines as brilliantly as ever, and anyone suddenly placed in the "Promenade des Anglais" from twelve to four o'clock any day could scarcely believe that it is mid-winter, and must admit that Nice is the true "winter garden" for the English and all other inhabitants of inclement northern climates.

Yours very truly,
JOHN L. THOUDELL, M.D.

Rue Croix de Marbre, Nice, Jan. 18th, 1868.

Amelia Wood requests us to send all particulars relative to the cobra poison, as she would like to make a few experiments herself if she can procure "heads." We scarcely know how to reply to such a request. We can only venture to recommend our fair correspondent to direct her attention to some more feminine pursuit.

Vaccinatio.—There is no law to prohibit it; but it may be questionable whether the Inspector of Vaccination would regard a principal as entitled to be paid for persons vaccinated by his unqualified assistant.

G. B., (Belfast.)—If obtained from a respectable source, little difference will be found in the medicinal virtues of the different coloured oils.

OUT-DOOR RELIEF.

THERE is evidently a strong feeling abroad in favour of a revision of the Poor-law system of out-door relief. According to the *Stourbridge Advertiser*, at a public meeting lately held at Halesowen for the purpose of considering what steps should be taken to relieve the distress prevailing among the working population of the parish, a resolution was passed declaring the present rate of out-door relief inadequate. A shilling and a loaf of bread may keep body and soul together for a time; but it is marvellous that a system should be persevered in which, rather than increase the out-door relief to two or even three shillings per week, insists upon paying four or five shillings per week for the manufacture of permanent paupers.

P. W.—An unqualified person cannot *legally* officiate for a practitioner duly qualified. An apprentice or an assistant can legally dispense medicine; but he cannot practise medicine or surgery. Thus, for instance, if an unqualified person attend, in the absence of his qualified principal, as a medical practitioner, the patient, we think, could successfully resist payment for such attendance.

THE letter of *Mr. A. Ormsby, C.E.*, shall be noticed next week.

PUBLIC VACCINATION AND THE NEW ACT.

To the Editor of THE LANCET.

SIR,—Will you kindly inform me in your next impression whether public vaccinators are entitled to the fees of the New Vaccination Act under their old contracts, or whether it is necessary to enter into new ones. The Clerk to the Board of Guardians of the union in which my district is situated informed me that the guardians intended to adhere to the old fees, unless I chose to determine my contract, at the same time hinting that if I did so, I might not be re-elected.

I can scarcely believe that such an interpretation of the Act can be justified; but as my friend, from his profession and position, speaks with authority, I thought it best to apply to THE LANCET for information and advice.

I may add that the Privy Council awarded me a gratuity of £13 16s. 8d., and that I have held my present appointment five years.

I am, Sir, your obedient servant,

January 16th, 1868. H. B.

*** In the Poor-law Board's circular letter of December 31st, 1867, on the Vaccination Act, 1867, is the following paragraph:—"From and after that day [i. e., January 1st, 1868], all previous Acts relating to vaccination are repealed, except in regard to divisions and districts of unions and parishes previously made, all contracts entered into under previous statutes then in force, all acts and proceedings commenced under them but not completed, and all liabilities and responsibilities incurred under them. All these matters are to remain in full force, notwithstanding the repeal of the Acts." And in the same letter, where the Board refer to the new scale of fees, they give the following paragraph:—"The Board understand this charge to apply to contracts to be made after this Act comes into operation, and consequently it will be open to the guardians and to the medical practitioners with whom they have contracted, forthwith to determine the contract when the fees are below the scale above set forth, and to enter into a new one." Without pretending to say whether the dictum of the Poor-law Board is a true exposition of the law, we suppose that if a contractor for vaccination had to sue his Board of Guardians for the recovery of his fees, he would only recover what the guardians had contracted to pay him; for he would, we assume, have to produce his contract to substantiate his claim, as well as prove that he had performed so many operations; and, if that be so, we hardly see how the guardians could be compelled to pay 2s., when the contractor has agreed to take 1s. 6d. Under these circumstances, the only method of obtaining the benefit of the new Act in the shape of increase in the amount of fee to be paid for vaccination is to annul the contract under the old Act, and enter into a fresh one under the new Act; and if that step is taken, it will, of course, be open to the guardians to refuse to contract with the same person; though we should think such a step very unlikely, especially where, as in our correspondent's case, the contractor has received a grant from the Privy Council, and therefore had good proof that he has well performed the work which he undertook.—ED. L.

M.D., (Sanitary Office.)—We do not see that the use of the new ground added to the churchyard need be injurious to the health of the neighbourhood, provided the proposed drain effectually take off all the surface water, and the interments be made at sufficient depth below the level of the surrounding ground, and of the foundations of any houses which may be now or hereafter built upon it.

Mr. Mosley.—We have perused with pleasure an in-patient's testimony to the kindness of the treatment he received in St. George's Hospital.

AN OBJECTIONABLE PRACTICE.

To the Editor of THE LANCET.

SIR,—Will you allow me to direct your attention to a practice not at all uncommon in our profession, and which is particularly galling to our younger members—viz., advertising for applications to be sent in for an hospital appointment, when it is almost certainly known that some local candidate who is on the field will get it.

It seems to me very unreasonable that men should be put to so much expense, when there is not the slightest chance of their being successful. I have no doubt that some alteration might be made for the better rendering all the advertisements regarding hospital appointments *bond fide*, which I am sorry to say they at present are not.

I am, Sir, yours very truly,

Edinburgh, January 14th, 1868. M.D. EDIN.

THE INQUEST AND POOR-LAW INQUIRY AT CHEADLE.

WE have received a very lengthy and angry letter from *Mr. Mackenzie* in reference to our comments on the late inquest and Poor-law inquiry at Cheadle. We cannot undertake the responsibility of giving publicity to several expressions of a personal nature, and to further accusations which it contains. The letter is mainly a reiteration of the charges brought against Dr. Webb. Mr. Mackenzie's *ex-parte* statements cannot set aside the sworn evidence of witnesses, upon which our comments were founded.

B. J. A.—We are unable to give the information our correspondent requires. An application made directly to the authors would probably be best.

CARBOLIC ACID IN SMALL-POX.

To the Editor of THE LANCET.

SIR,—I enclose an account of a case lately treated in our hospital, which, if you think it of sufficient interest, I should be glad to have published in THE LANCET.

A beautiful young lady, in passing with her friends through Kingston, was seized with the primary fever of variola. From the violence of the symptoms—the intense headache, followed by delirium, the vomiting, the atrocious spinal pains—an aggravated case was apprehended. The eruption duly appeared, and she was at once (November 20th) removed from the hotel to a small-pox ward in the Watkins' wing of the Kingston Hospital. The whole body was very thickly studded with the eruption, and many patches of confluence appeared on the face and forehead. The mouth, fauces, and conjunctivæ were covered with the eruption.

The first object, after saving the patient's life, was to prevent disfigurement. The ward, of which she and the nurse were sole occupants, is large, lofty, and thoroughly ventilated. The temperature throughout was maintained at 64° during the day, and 55° at night. The room was darkened, and a candle only used for light. The usual general treatment was adopted—viz., animal broths, bread, &c., for food, four ounces of port wine daily, and a quarter of a grain of morphia in half an ounce of brandy at night. On and after the ninth day of the eruption, the quantity of wine, morphia, and brandy was doubled; Gregory's mixture was also given when necessary.

But I am induced to transcribe as briefly as possible the local treatment, its success having been so gratifying. We have for years expected to prevent pitting of the face by excluding light and air from its surface. For many years I have habitually used nitrate of silver, tincture of iodine, mercurial ointment, &c., to the face for this object, with variable success. In this case I employed an ointment—of carbolic acid, two drachms; mutton suet, two ounces, and coloured with lampblack. This ointment was spread thickly upon black cotton wadding, which was applied over the face and forehead, holes being cut for eyes, nostrils, and mouth. This mask was changed every second day, and the face gently washed with soap and warm water, and then, including the whole body, with warm water impregnated with carbolic acid.

From the commencement of the eruption no unpleasant symptoms occurred. There was none of that intolerable itching, and no secondary fever—the suppurative fever—ever made its appearance, and on the separation of the last scab with the removal of the last mask, I was delighted to find that not a single pit had been produced.

I am persuaded that the carbolic acid diminished the amount of the suppuration and its duration, and that it prevented the secondary fever. Mr. O'Sullivan, the intelligent house-surgeon, smeared daily one arm of the patient with the ointment. The contrast in the character of the pocks on the two arms was remarkable. The pustules on the arm operated upon were not nearly so full, and the scabs fell off earlier than those on the other arm.

Whatever part the carbolic acid played in this case in preventing pitting, or how much the exclusion of light and air had to do with it, I cannot say; but this we do know, that carbolic acid is a powerful disinfectant, and that it destroys microscopic vegetations. It certainly prevented the peculiar odour of small-pox in the room, and, as I have already said, I attribute the absence of secondary fever to this agent.

I should be glad if some of my medical brethren would try this local treatment when opportunity offers, and report the result. My present opinion is—based on theoretical grounds, and on the experience of this case—that hereafter the mortality from small-pox may be diminished, and the disfigurement of God's image entirely abolished.

I remain, Sir, yours truly,

HORATIO YATES, M.D.,
Senior Medical Officer, Kingston General Hospital.

Kingston, Canada, January 3rd, 1868.

Mr. R. Clayton, Surgeon, of Accrington, has written to say that he is most displeased and annoyed with the advertisement which appeared in the *Accrington Reporter*, laudatory of his skill. As we expected, Mr. Clayton did not sanction such a proceeding. A gentleman of his character and position must necessarily have felt hurt at being the subject of such an outrageous puff.

Lieut. Marryat, R.E., will find all the information he requires in Dr. Hassall's work on "Food and its Adulterations," published by Longmans. Some of the numbers of THE LANCET containing the "Reports" are out of print.

ATTENDANCE OF HOSPITAL PHYSICIANS AND SURGEONS.

To the Editor of THE LANCET.

SIR,—A great deal has been said relative to students not attending hospital practice and lectures; but I do not think the fault rests solely with the students, at least as regards some of the medical schools. My nephew was at the London Hospital. Now see the arrangement. We have Dr. Herbert Davies going round at nine o'clock A.M. on Tuesdays and Fridays, and on that very same hour, and on the same days, Mr. Hutchinson gives his surgical lectures. Again, we have Dr. Andrew Clark and Mr. Hutchinson going round at the same time—viz., on Mondays and Thursdays at one P.M. Now, no one can deny that such arrangements are absurd and injurious, as the lectures of Mr. Hutchinson and the hospital practice of the three are too valuable to be lost. I quote the London Hospital, because I know such are the arrangements there, and I have no doubt that in other medical schools equally absurd regulations exist. If a surgeon or physician is ambitious of being a medical or surgical tutor, let him suit his hours to the convenience of his pupils.

I am, Sir, yours obediently,

January 12th, 1868. ALCULATUS.

G. H. W. writes in confirmation of our views as to the necessity for an amendment of the system of out-door relief. "I have been connected," he says, "with several country unions, and, as a rule, have found medical orders for relief of the sick ignored or only attended to at the discretion or convenience of a relieving officer. I can call to mind now two cases: one in which a poor old woman walked no less than twelve miles to obtain, at most, 1½ lb. of neck of mutton; and another of a woman suffering from pneumonia, lying twenty-four hours without nourishment because the relieving officer had either no time or no convenience to visit her—a practice he insisted on before acting on a medical order."

Mr. Saltiel is not a registered practitioner. We have received numerous letters respecting a circular issued by this person.

PRESCRIPTIONS.

To the Editor of THE LANCET.

SIR,—Can you explain this enigma? Almost all the examining bodies now require their candidates to be better up in Latin than formerly, and yet it is getting quite the fashion for physicians to write the direction to their prescriptions in *English*; and as to general practitioners, I think we may say they invariably use the mother tongue.

Perhaps some of your readers may be longer-sighted than myself, and can give me an explanation.

While I fully concur in the importance of a man being able to understand sufficient Latin to prevent him from making any serious mistake, I cannot see that it is necessary for an examining body, in granting licences for general practice, to compel their candidates to "decline" this, that, and the other. Far better would it be, in my humble opinion, if that same time were spent in examining their candidates more practically; indeed compelling them to give their opinion upon cases actually in the examining room.

I am, Sir, yours obediently,

January, 1868. A SUBSCRIBER.

Mrs. Isabel Thorne.—Such cases, we believe, are exceedingly rare; and when they do occur, are condemned as strongly by the profession as by the public.

M.—Coles's is not a lever but a spiral spring truss, and is applied on the same, and not on the opposite side.

A CORRECTION.

To the Editor of THE LANCET.

SIR,—Will you allow me to note an error which appears in a paragraph, headed "Royal Microscopical Society," in your impression of Saturday last. The name of the donor of the large and valuable collection of objects and drawings is Dr. G. C. *Wallich*, Retired List, H.M. Indian Army, author of "The North Atlantic Seabed," &c. Fearing that many of your readers may fail to recognise under the disguise of *Wallish* so distinguished a member of our profession, I have thought it my duty to ask you to make this correction.

Yours very faithfully,

JABEZ HOGG,
Hon. Sec. Royal Microscopical Society.

Bedford-square, Jan. 20th, 1868.

Liquor Folii Ricini.—The liquor is said to be efficacious in increasing the secretion of milk in suckling women.

Outward Bound.—All the colonies are well provided with medical practitioners. Colonial surgeons, of which there are many, are appointed by the Secretary for the Colonies, to whom application should be made.

"AROMATIC BITTERS."

To the Editor of THE LANCET.

SIR,—I am anxious to know the composition of the cordial which, under the pleasing name of "Aromatic Bitters," is now being so largely imported from America. I was told the other day by one of our leading purveyors that the demand was so great it could with difficulty be supplied.

A lady from New York recommended these bitters to a friend of mine, with the assurance that in the United States all the ladies were taking them, and that they were most useful "whenever you felt tired or in low spirits." Are they alcoholic? And, if so, what is their strength? It is well to have things called by their right names; and if a glass of "Aromatic Bitters" is a *dram*, it is only right the ladies should be told that it is just "a go of gin" in a mild form.

Your obedient servant,

January, 1868. D.

Juvenis.—Nothing is more difficult to establish than "a general medical tariff." Much will depend upon whether it be a town or country practice, and upon the means of the persons who are attended, as well also as upon the "custom" of the locality. A society of practitioners at Sydenham, Kent, have lately published a tariff, which might be consulted with advantage. The Honorary Secretary is Dr. John M. Bright, 1, Westbourne-villas, Forest-hill, Kent.

CHILBLAINS.

To the Editor of THE LANCET.

SIR,—Will any of your readers kindly inform me of the predisposing causes of chilblains? I am perfectly convinced from what I have seen of the topical treatment of this most troublesome affection that it is only palliative.

One of my patients, who is quite a martyr to this complaint, and has been so for years, is a person with a good constitution, and he tells me he has not been confined to bed so much as a single day for nearly a quarter of a century. I have tried numerous local applications, as well as warned the patient of its exciting causes; but as the disease is constantly showing itself, notwithstanding this treatment, I am inclined to think there must be some predisposing cause at work.

I am, Sir, yours obediently,

January, 1868. A JUNIOR PRACTITIONER.

Clericus.—If our correspondent will be good enough to give us a more precise description of his wants, we will endeavour to indicate where the information he requires can be obtained.

WE are compelled to postpone until next week a notice of the recent meeting of Governors of the Harrogate Bath Hospital.

MATERNAL IMPRESSIONS.

To the Editor of THE LANCET.

SIR,—May I refer your correspondent, "A. P. C.," of the 11th instant, to THE LANCET of Dec. 21st, 1867. He will there find that Mr. Paget is my authority for the case quoted. That gentleman received the facts from those most nearly concerned, and he has had under his care both the deformed children.

Yours obediently,

Montague-street, January 20th, 1868. THOMAS SMITH.

COMMUNICATIONS, LETTERS, &c., have been received from — Mr. Simon; Sir Ranald Martin; Dr. Geo. Harley; Sir Henry Thompson; Dr. Marcet; Dr. Humphry, Cambridge; Mr. Erichsen; Dr. Richardson; Dr. Atkinson; Mr. Vanderbyl, M.P.; Mr. Gude; Mr. J. E. Gray; Dr. Grailly Hewitt; Dr. Swallow; Dr. Miller; Mr. Behnes; Mr. Spencer; Dr. Grant; Dr. Pitt; Dr. Haydon, Bovey Tracey; Dr. Crowther; Dr. J. Smith; Mr. J. P. Billing, Heathfield; Dr. Green; Mr. Gilbert; Mr. Boden; Mr. Poole; Dr. Aitkin; Mr. Webb, Blakeney; Mr. Marshall, Norwich; Dr. Duke, Dover; Dr. Ingle; Dr. Rogers; Mr. Robertson; Mr. W. F. Smith; Mr. G. Stockwell, Batley; Mr. Beckingham; Dr. Elliott, Southsea; Mr. Crofts, Harrold; Dr. Davies; Mr. Cottingham; Mr. Dickinson, Middlesborough; Dr. Shapter, Exeter; Dr. Turnbull; Rev. Mr. Chope; Mr. Tucker, Brixham; Dr. R. D. Powell; Mr. J. Gay; Dr. Bastian; Mr. Hunter, Aberdeen; Mr. Howard; Dr. Allen, Longton; Dr. Gavin, Roscommon; Dr. Hilton Fagge; Mr. Kelly, R.N.; Dr. Kennedy, Dublin; Mr. Arnold, Robertsbridge; Mr. Lawson, Carrick; Mr. Balbirnee; Mr. Brady; Dr. Tisard, Weymouth; Surgeon-Major Wyatt; Mr. Ormsby; Mr. Condy; Dr. Cheves; Dr. Helm, Rugby; Dr. Mackenzie, Cheadle; Messrs. Black, Edinburgh; Dr. Smith, Boston; Mr. Venables; Mr. Tyson, Wolverhampton; Mr. Tait, Wakefield; Dr. Harland, Mayfield; Dr. Fairless, Coupar Angus; Mr. Dyke, Merthyr; Dr. Macnab; Mr. Yorke, Granard; Dr. Walker; Dr. Trousdell, Nice; Mr. A. Farr; Mr. T. Wood; Dr. Creswell, Cooper; Dr. Holland; Mr. Malcolm, Leamington; Mr. Key; Dr. Lyons; Mr. Camden; Dr. Clarke, Chasetown; Dr. Wilson, Castle Eden; Mr. Hodson; Mr. Gramshaw; Mr. King; Mr. R. Leyland, St. Austell; Mr. Serjeant; Mr. Cox; Mr. W. Wright; Lieut. Marryat; Miss A. Wood; Dr. Pughe, Machynlleth; Dr. Shortt, Madras; Dr. Lister, Haydock Lodge; Mr. Slade, Portland; Dr. Skene, Troon; Mr. Sissling; Dr. A. D. Henry, Kilcullin; Dr. Stopheos, Dunkinsely; Mr. Pearse, Brierly Hill; Dr. Fraser, Glasgow; Dr. Hartley, Malton; Dr. Poole, Paul's Cray; Mr. R. Clayton, Oswaldtwistle; Mr. Mackay; Mr. Eady; Mr. T. S. Wright, Leamington; Mr. Blasson, Edgware; Dr. Cregeen, Liverpool; Mr. R. Flockton, Lynn; Dr. James; Mr. Wallis; Mr. Jennings, Coleford; Mr. Bedwell, Northleach; Mr. H. Keyworth; Mr. Ramsden, Halifax; Mr. Phillips; Mr. Newey, Birmingham; Mr. Morris; N. W. A.; S. S.; The Hon. Sec. of the Ventnor Hospital; L.; J. D.; L. T.; Alpha; B. J. A.; W. J. M.; Sanatory Officer; Z.; Lumbricus; T. H. B.; Fair Play; Outward Bound; Vaccinatio; J. T.; The Secretary of the South Kensington Museum; W.; G. B.; Juvenis; H. B.; Verbam Sat.; M., Sheerness; The Secretary of the Royal Naval Supplemental Fund; Academicus; Leicestershire; The Hon. Sec. of the South London Medico-Chirurgical Society; G. H. W.; &c. &c.

THE *Cardiff Chronicle*, the *Delhi Gazette*, the *Torquay Times*, the *Cumbria Daily Leader*, the *Essex Standard*, the *Limerick Chronicle*, the *Inglewood Advertiser*, the *Daily Express* (Bristol), the *Bombay Gazette*, the *Brierly Hill Advertiser*, the *Yorkshire Post*, the *Hampshire Advertiser*, and the *Shoreditch Observer* have been received.

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